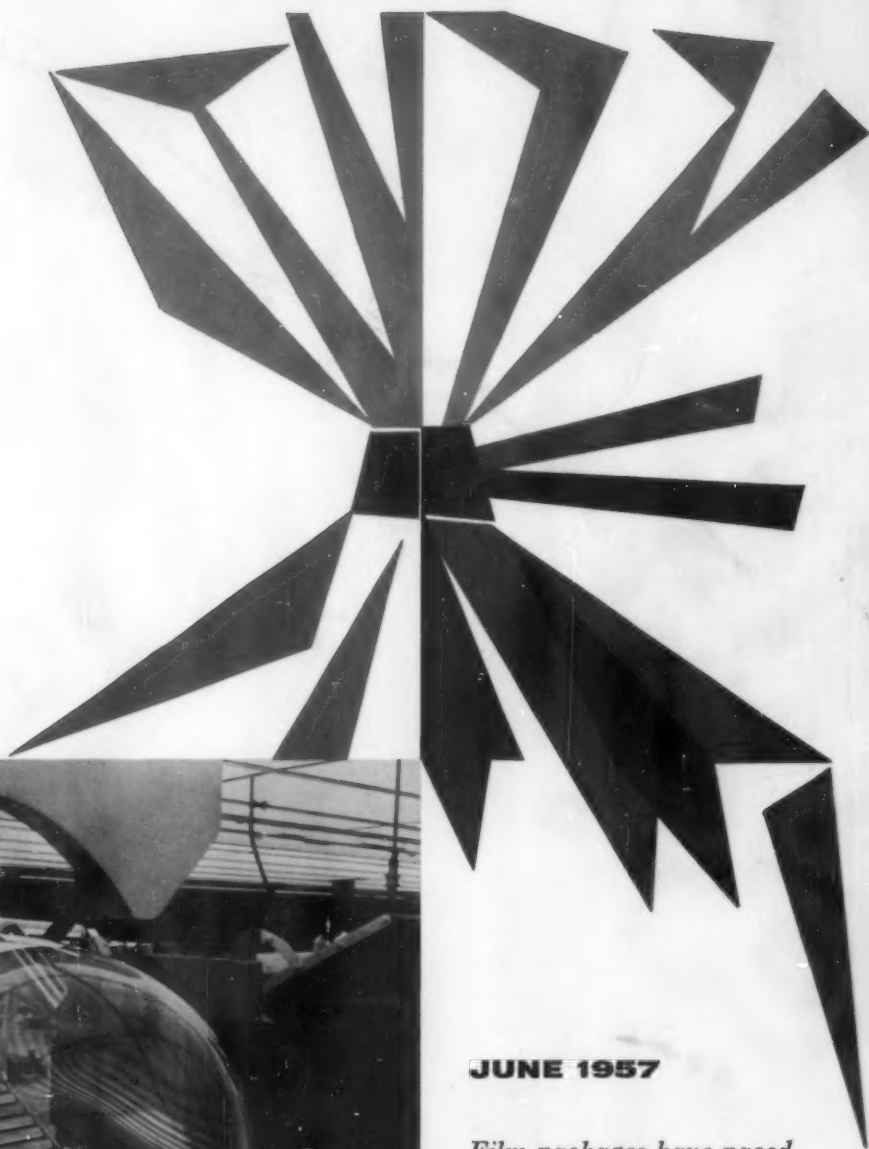


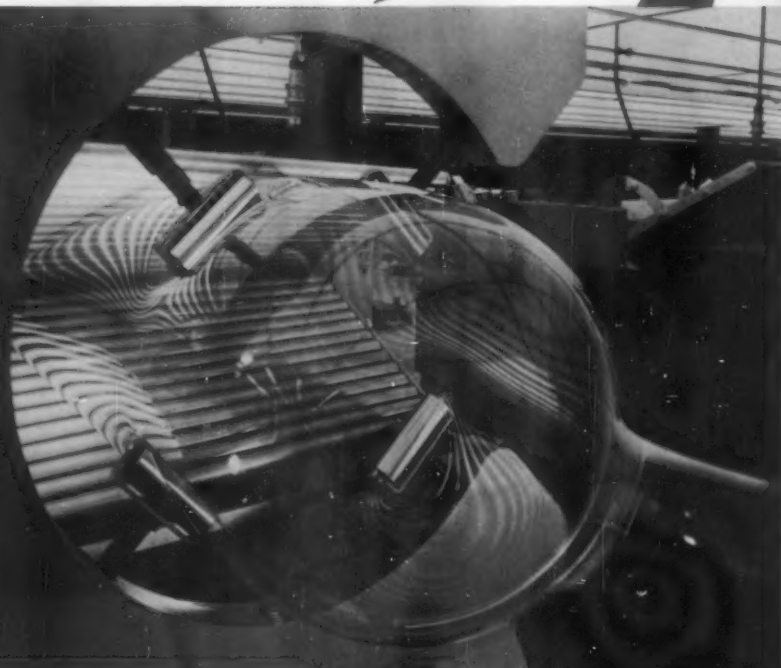
MODERN PACKAGING



JUNE 1957

*Film packages have paced
the postwar trend
to the kind of merchandising
that sells on sight*

COMPLETE CONTENTS p. 2



for less than 1/20th of a



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SOFT SEAL is the simple way to make shipping cases easy-to-open. No gimmicks. No new equipment. No extra labor. Why? Because SOFT SEAL simply replaces adhesives that seal with a hard-to-open tearing bond.

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GAIR

creative engineering in packaging



BOXBOARD AND FOLDING CARTON DIVISION OF CONTINENTAL  CAN COMPANY
530 FIFTH AVENUE, NEW YORK 36, N. Y.

MODERN PACKAGING

- 101 **The urge to simplify**
Voluntary supplier-user programs eliminate time- and money-wasting variations in packaging.
- 106 **When ethical goes popular**
Ciba's design approach for over-the-counter, non-prescription drug packages.
- 109 **Contoured rifle sight**
Set-up box with thermoformed transparent blister gets expensive rifle sights out on counter.
- 110 **Boxed bananas**
Four-color film-wrapped tray is packed by a method that provides standard weight and price.
- 112 **Film packages**
Supplier Industry Survey. This postwar boom baby's volume has increased 459% in 10 years while cost declines.
- 118 **Semi-rigid shipper**
New single-ply kraft paper container saves flour mill \$24,000 a year.
- 120 **Design Histories**
Polyethylene lemon . . . heat-and-eat sausages . . . "Cup of Youth" goblet . . . more selections of the month.
- 124 **The frozen sandwich**
New foil-wrapped, cartoned items open a new market for frozen-food packers.
- 126 **The bag that couldn't be**
Wide gussets in Cyanamid's multiwall bag and new filler cut cube of unit load by 20%.
- 128 **Packaging Pageant**
Twin-pack with corrugated partition . . . miniature medicine chest . . . metallic tear tape . . . other new ideas.
- 132 **New force for glassware**
Anchor Hocking's pre-packs combine colorful design with protection for a fragile product.
- 134 **Automated French fries**
New automatic carton filler and check weigher mechanize packaging of this product for the first time.
- 136 **Display Gallery**
Flexible wall panels . . . 3-D illusion . . . animated Stripe display . . . cigar holders out front.
- 138 **Saving with corrugated**
Pettibone Mulliken's heavy-equipment parts in strapped cartons get better protection with 30 to 50% economy.
- 142 **Olive oil's case**
Putting gallon cans in unitized cartons for import from Italy cuts costs all along the line.
- 144 **Self-selling thermoform**
Formed vinyl unit gives impulse appeal to a Burroughs Wellcome proprietary drug item.
- 149 **Tennis balls by the dozen**
Wilson's new carry carton sells bigger unit, is convenient for consumer, saves labor on production line.

Technical

- 151 **Saran-coated films**
Adding only 0.1 mil to base films gives dramatic improvement. *By M. E. Kelly, Jr., S. F. Roth and H. R. Bailey.*
- 157 **Testing poly-cello pouches**
Swedish technique and instrument evaluate vacuum and liquid-holding packages. *By I. Olsson and L. Pihl.*
- 162 **Questions and Answers**

Departments

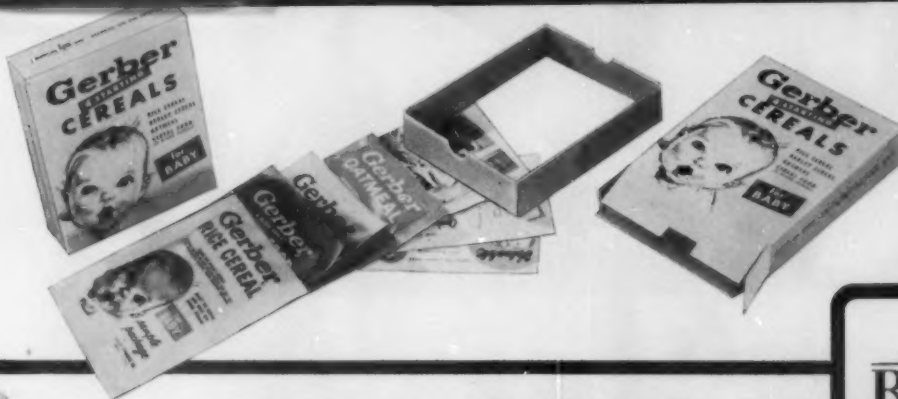
- 164 **Equipment and materials**
- 176 **Plants and people**
- 198 **For your information**
- 207 **Manufacturers' literature**
- 211 **U. S. patents digest**
- 234 **Index to advertisers**

- 43 **Background for Packaging.** *Notes, quotes and comments.*

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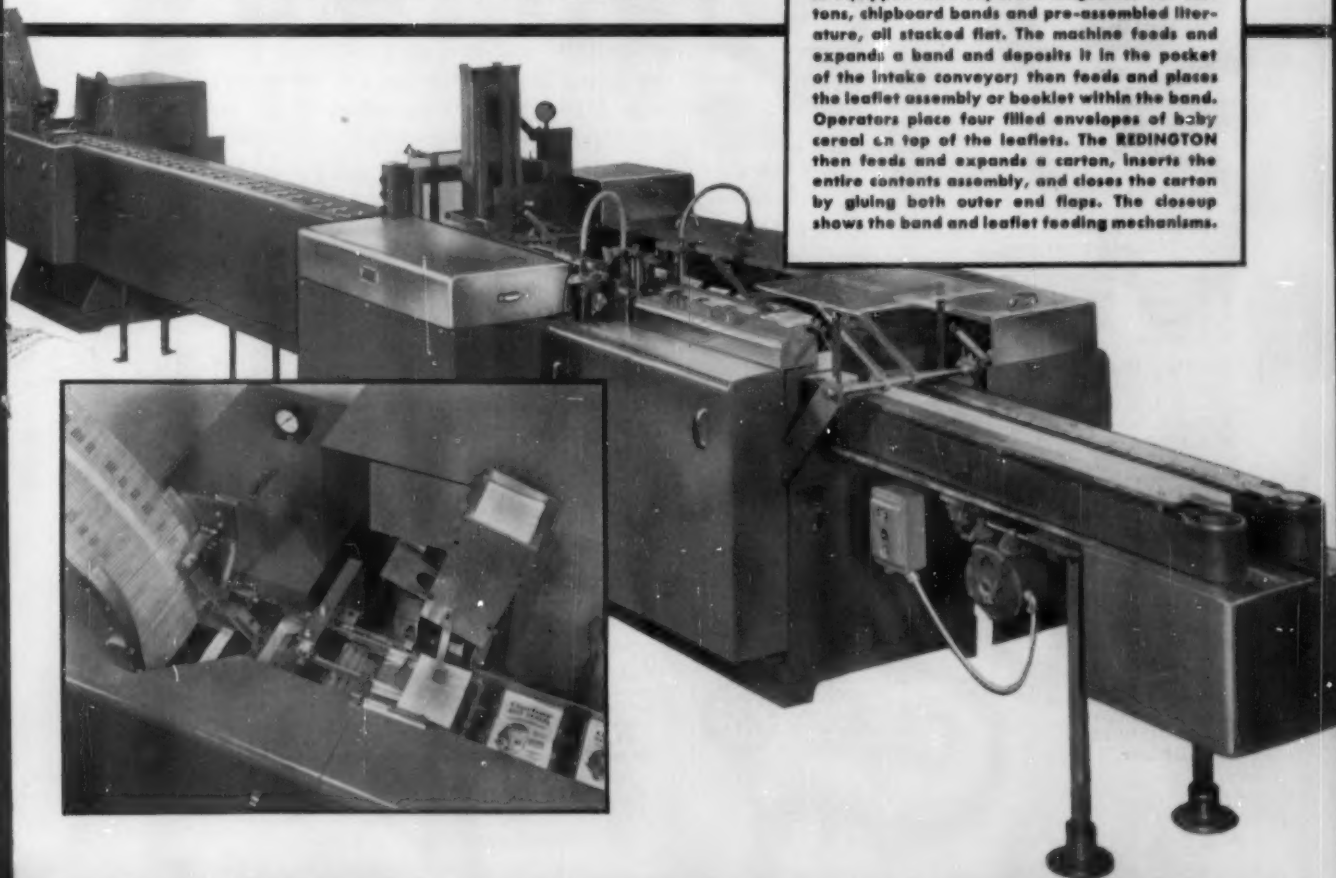
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MODERN PACKAGING®

LRP—a key to the future

Recently businessmen have been made increasingly aware of the term "long-range planning." The phrase—now commonly condensed to the initials LRP—has been tossed around with considerable abandon.

The number of firms now planning their strategy and tactics from three to five years ahead has recently doubled. Most companies which have launched an LRP program have done so only within the last two or three years.

What is LRP? It is, according to the Assn. of Consulting Management Engineers, "the continuing process of blueprinting company objectives for at least a five-year period, documenting strategy with facts and figures, and setting a timetable of steps to be taken."

Where does packaging fit in with this? Certainly it would be foolish to attempt to blueprint every packaging change five years ahead; changing technology and changing market conditions demand a great deal more flexibility than this. But a continuing forward study of such fundamentals as population trends, geographical shifts and consumption of goods can be projected with some certainty and can be as important in orderly planning of the packaging operation as in any other department of the business.

There is general agreement that LRP demands a look ahead of at least five years. A shorter view quickly becomes entangled with current operating conditions; a longer one grows pretty hazy and impractical. And the five-year plan must be progressive—always looking five years ahead of this year.

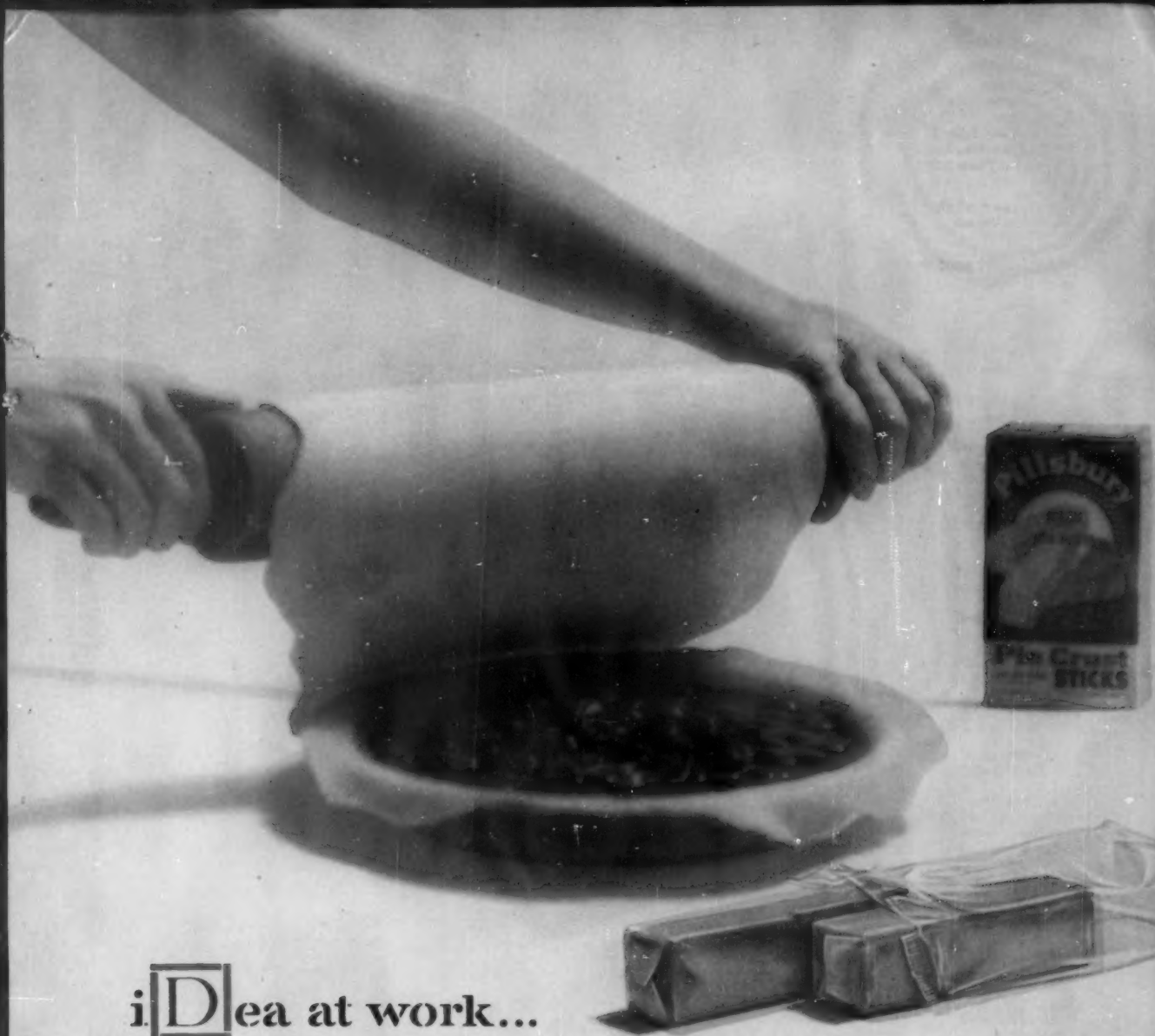
Many executives have steered clear of LRP because they felt that it would impose some sort of strait jacket upon them and restrict their freedom of action and creativity. But after all no plan, however detailed, can be really locked up, nor can it be perfect. It is a guide to future action, not a set of hobbles. It is a moving picture of an advancing enterprise, not a snapshot.

No one can foresee with complete accuracy all the twistings and turnings of the road ahead. But a plan does make it possible to operate on the basis of some fundamental, documented strategy. It avoids hazardous leaps from crisis to crisis and from decision to decision with no clear concept of where one wants to go and how to get there. Packaging needs long-range planning.

The Editors



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that cuts costs too...



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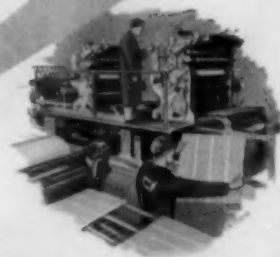
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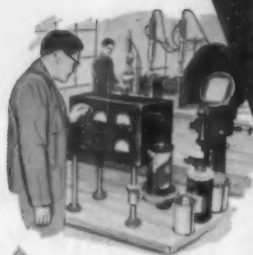
DESIGN



CLOSING MACHINERY



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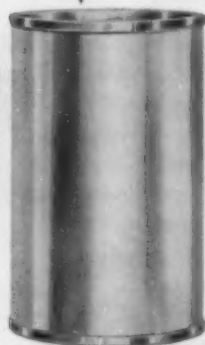
RESEARCH DEVELOPMENT



SALES SERVICE



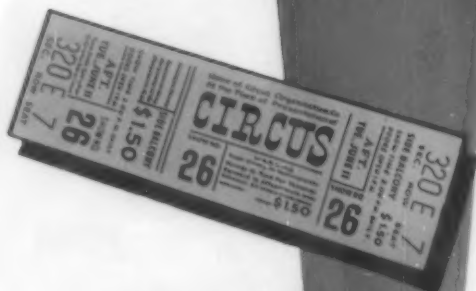
PRODUCT RESEARCH



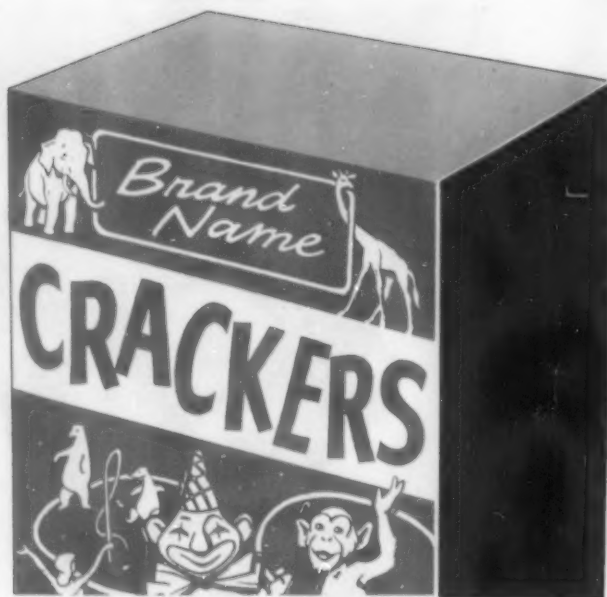
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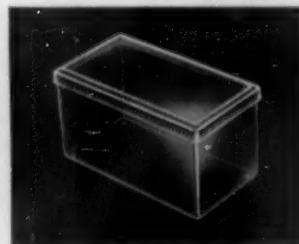


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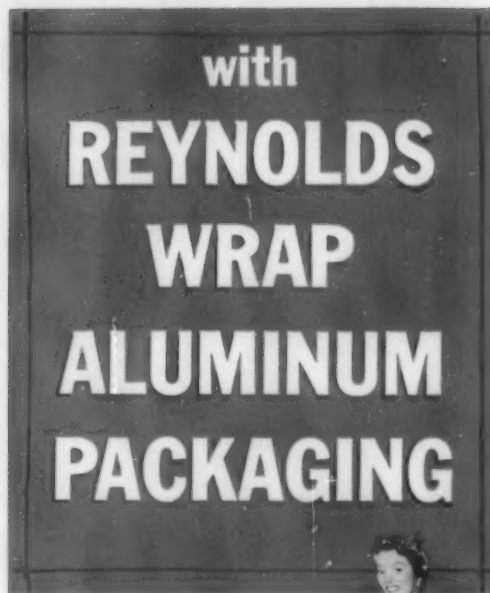
FIZRIN Instant Seltzer, new alkalizer-analgesic of the National Brands Division, Sterling Drug Inc., is ready to effervesce the instant water is added. This readiness to react is highly desirable – but it means that the powder in the packet must have utmost protection against moisture.

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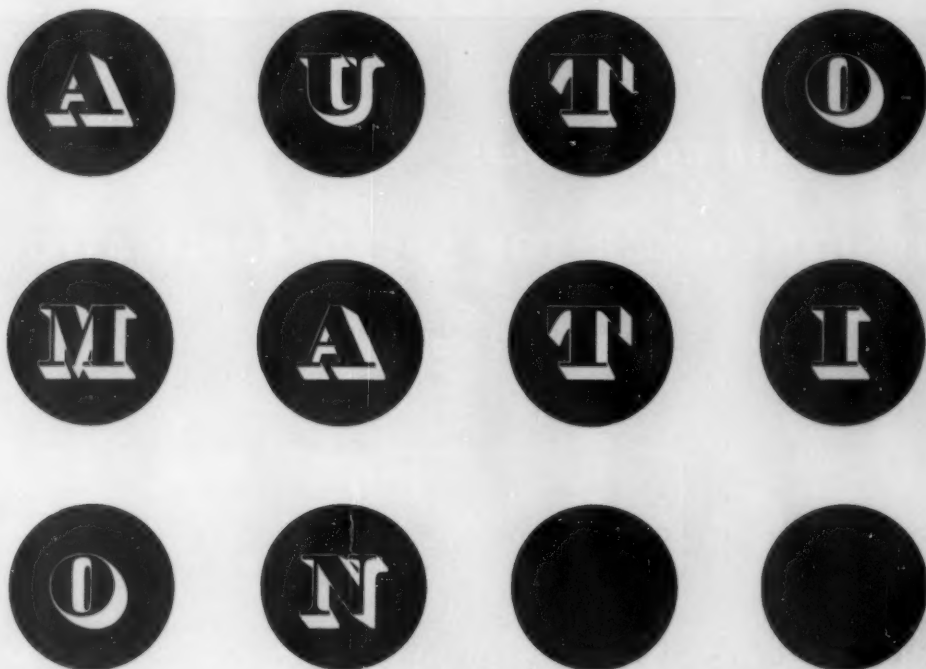
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It's simple arithmetic! 100% automation accelerates production, cuts overhead, brings prices down to the level of many, not just the few. 100% automation means other advantages too. **A better container:** diamond brilliance that enhances your product, snug lids that really protect.

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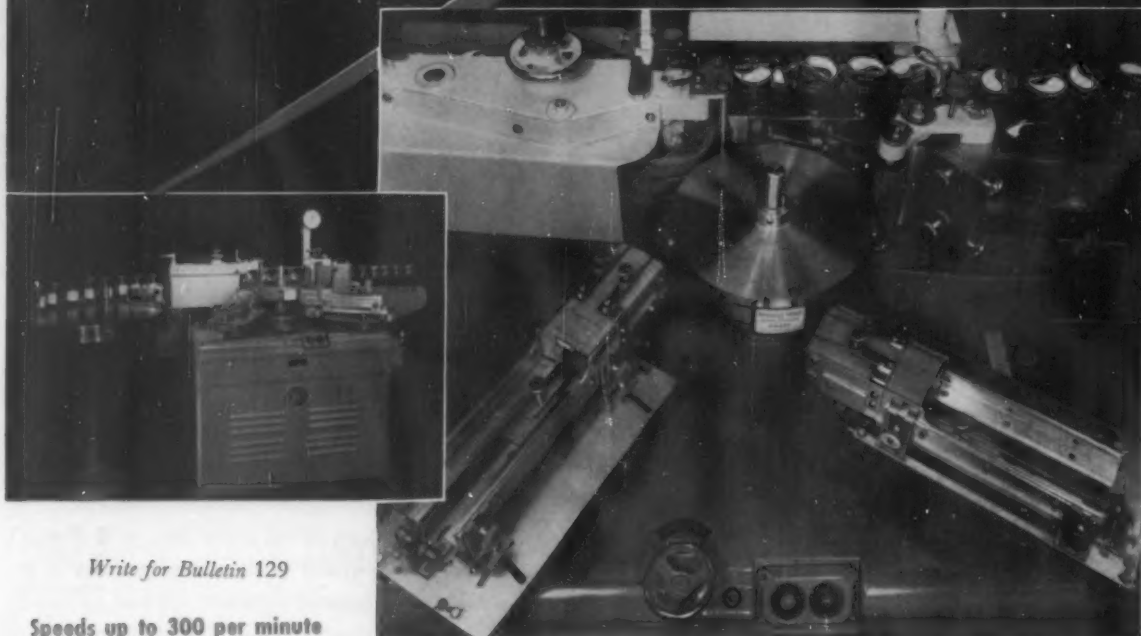
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Speeds up to 300 per minute

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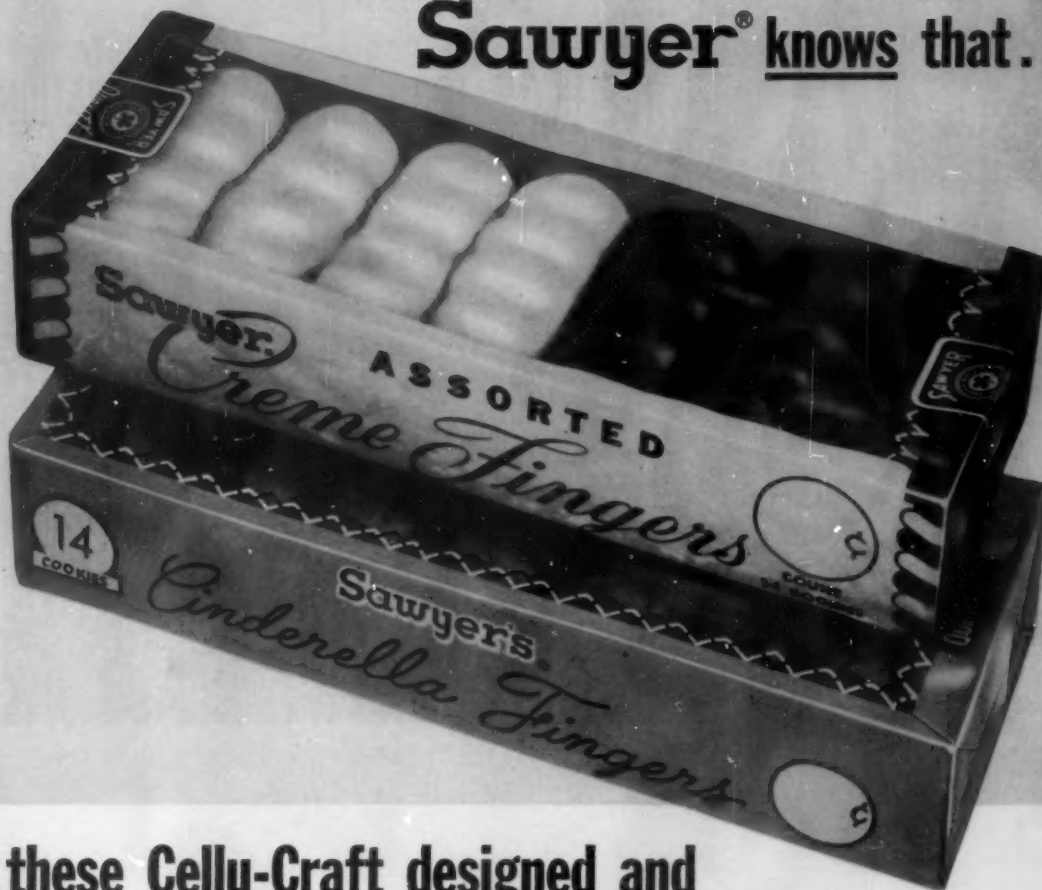
Straight through without stop or pause — that's the answer to the Lightning Labeler's (1 and 2) smooth, uninterrupted delivery of containers with accurately registered, smoothly adhered labels. If your container is round, the Lightning's a machine you should look at, by all means!

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-PAK

How to keep
the **ZEST**
in
yeast



Standard Brands
laminates with

Pliofilm

Big as life, on the package you see these words: "Active" and "Dry."

And clue they are to the problems involved in safeguarding the zest of fine dry yeast like famous Fleischmann's until it goes into delicious dishes.

Fleischmann's has found that PLIOFILM halts those "leakers"—packages which lose their "dryness" and get "active" before they are meant to!

Hence the bright, new "Triple-Fresh" Pack by Standard Brands which features PLIOFILM right next to the thirsty product so the inert nitrogen stays in and life-robbing oxygen stays out.

It isn't the first time PLIOFILM has licked a tough problem. You see, this rugged film readily laminates to virtually anything (in this case, to foil), heat-seals with a welded bond as tough as the material itself, is extremely moisture- and puncture-resistant.

Fact: No other transparent film is as effective for lamination as PLIOFILM, is so free of "pinholes," so grease-resistant, so low in cost.

Question: Why not check into PLIOFILM for packaging your dry yeast, hard candy, soup mixes, milk powders, pharmaceuticals, instant coffee, fresh or frozen meats? Get the full facts from the Goodyear Packaging Engineer, Goodyear, Packaging Films Dept. F-641B, Akron 16, Ohio.

GOOD THINGS ARE BETTER IN

Pliofilm



Pliofilm, a rubber hydrocarbon resin—T.M. The Goodyear Tire & Rubber Company, Akron, Ohio

10 PRODUCTS...

with varied dispensing requirements
ALL SERVED BY ONE VALVE!



- Nos. 1, 2, 4 and 5 use dispenser filaments requiring no overcaps. Have OEL patented halfturn lock and unlock operating button, suitable for shaving creams, hand lotions, shampoos, coarse plant sprays, fire extinguishers, etc. Available also with greater flow for "fluffing" effect.

- Nos. 7, 8 and 10 feature cosmetic type dispenser button for glass, plastic and metal containers. Available for very fine, standard and three-phase dispensing: cosmetics, hair sprays, powders, etc.

- Nos. 3, 6 and 9 have standard dispenser button using protective overcap. Available for standard insecticides, room fresheners, products needing fine volume, heavy or wet discharges, such as paints, garden sprays and powders. Non-clogging, always dependable.

- For three-phase packages; provides mechanical particle break-up. Highly efficient on containers of water-based products and on packages using small amounts of propellant for maintained spray pressure.



"500" SERIES

Any product, any application, the OEL "500" Series will satisfy your requirements with one standard valve.

This valve is simple and more dependable because of advanced engineering. It has these advantages:

(1) Designed for pressure or cold filling; can be loaded faster, more economically, with less propellant loss during pressure filling, than any other valve.

(2) Greater safety when using inflammable materials.

(3) More aesthetic appearance — with excellent dispensing control.

(4) Standard, regularly stocked dispenser fitments provide any desired result. Unlimited design opportunity for custom use.

REMEMBER — The OEL "500" will solve your dispensing problem with one valve. Your packaging will have added distinction with OEL's exclusive custom appearance.

Write for
complete
information
TODAY!



OIL EQUIPMENT LABORATORIES, INC.

600 PEARL STREET
ELIZABETH, NEW JERSEY

CASE HISTORY:

"EG" Filler
Re-Mark Chemical Company, Inc.
Miami, Florida
Producers of
"Hurricane" brand insecticides



Packaging costs *Slashed* on both long runs and rush orders

"We have obtained improved production from the Stokes & Smith "EG" Filler and it has substantially reduced our costs of packaging insecticides," reports Mr. Paul Marks, the president of Re-Mark Chemical Co.

"It is very versatile. We can change from one type of packaging to another with little delay. It is excellent for long runs and equally good for filling rush orders. I know of no other equipment so accurate and easy to handle or so well suited to our needs."

Because dust insecticides are non-free

flowing, the "EG" auger principle provides the distinct advantage of extreme accuracy and speed in filling both bags and canisters in from one to ten pound packages. The filler operates from 5 to 18 hours a day and occasionally is put on a 24-hour, three-shift day without maintenance stops.

Filling is changed as often as five times a day for different products and package sizes. And because of the "EG" Filler's speed and quick changeover, it has not been necessary to warehouse large stocks since rush orders can be handled economically.

Why not discover how the versatile "EG" Filler can cut your packaging costs? Write to:



STOKES & SMITH CO.

4904-E SUMMERDALE AVENUE, PHILADELPHIA 24, PA.

Pacific Coast: SIMPLEX PACKAGING MACHINERY, INC., 334-23rd AVE., OAKLAND 6, CALIF.



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Symbols of your potential through Tupper Corporation



Premiums



Do-It-Yourself Materials

• Whatever your custom needs in plastics manufacturing, call on Tupper's wide experience and modern manufacturing facilities. Our large, up-to-date plants, equipped with the best production machinery, are available for materials, injection molding, extruding, vacuum forming, blow molding—and other advanced processes.

The Tupper Engineering Department has developed the greatest number of patents in the industry for polyethylene seals, closures, and dispensers—and other items in other plastics. This know-how can be tapped by you to place your plastic products in a position of leadership.

Tupper seals and other Tupper products are protected against unauthorized manufacture by about 150 U. S. and foreign patents and patents applied for, plus numerous trademarks and copyrights.

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Address correspondence to:

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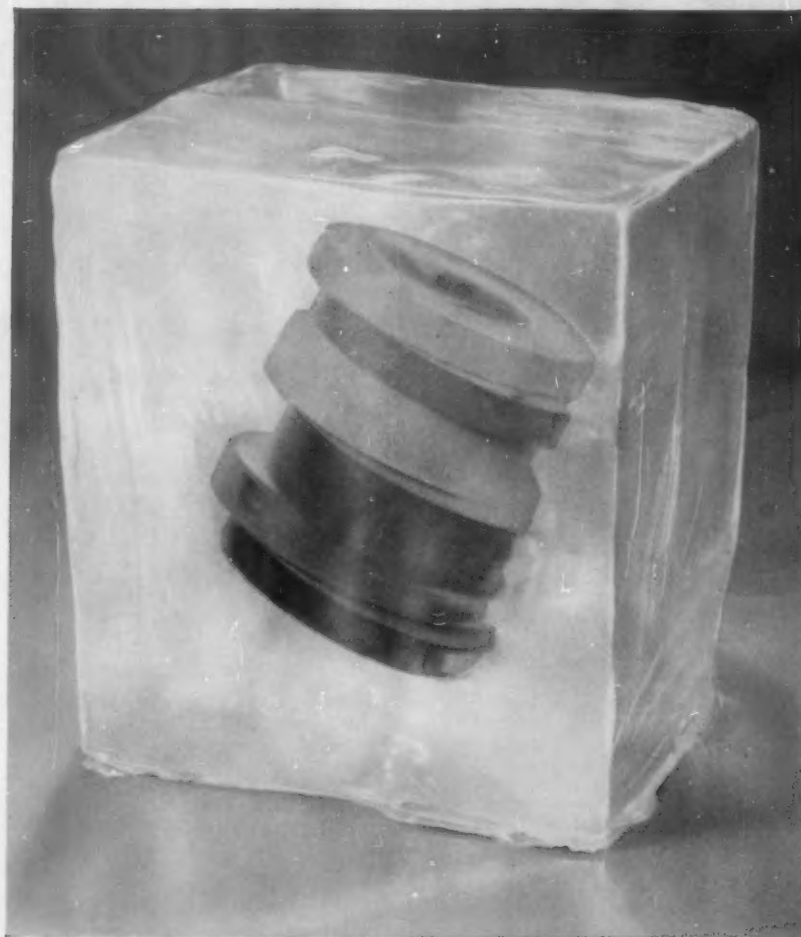
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Dept. MP-6

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TUPPER!
Trademark



Tape that holds in freezing cold!

A tape so cold-resistant, it holds firmly at 40° below ... so wet-proof, it transmits less moisture than even a wax-impregnated carton! "Scotch" Brand Acetate Fibre Tape is tough, long-aging, dimensionally stable. And it's available in 12 colors: red, green, orange, blue, orange-yellow, light-green, yellow, light-blue, white, black, silver, and gold ... plus transparent. Ask your "Scotch" Brand Tape Distributor about Acetate Fibre Tapes, or send for folder described at right. And remember, always specify "Scotch" Brand, the *quality* tape ... and stick with it!

**Look what you
can do with it!**



JAN-P-127, the joint Army-Navy specification for carton sealing tapes, is met and surpassed by "Scotch" Brand Acetate Fibre Tape No. 710. This tape sticks to any surface... resists abrasions and scuffing.



SEAL air-vents of volatile liquid containers with short tabs of "Scotch" Acetate Fibre Tape. Above: Applying tape over opening in storage battery cell caps prior to shipping. It's quick, easy, safe.



PROTECT large equipment in storage or shipping by sealing with moisture-proof paper and "Scotch" Brand Acetate Fibre Tape. This long-aging tape sticks at a touch to waxed or plastic-impregnated surfaces.



SEND FOR FREE FOLDER describing properties and uses of "Scotch" Brand Acetate Fibre Tapes. Just write on your letterhead to 3M Co., St. Paul 6, Minn., Dept. EA-67.

ACETATE FIBRE TAPE ...one of over 300 Pressure-Sensitive Tapes, trademarked...

REG. U.S. PAT. OFF.

SCOTCH BRAND

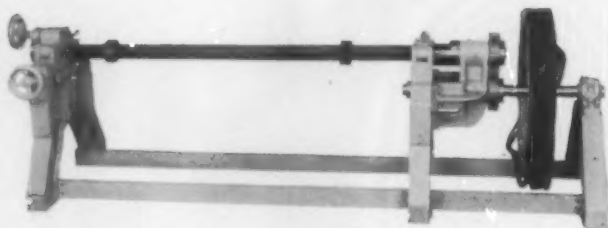
The term "Scotch" is a registered trademark of Minnesota Mining and Manufacturing Company, St. Paul 6, Minn. Export Sales Office: 90 Park Ave., New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario.



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double shaft rewriter for wrapping paper

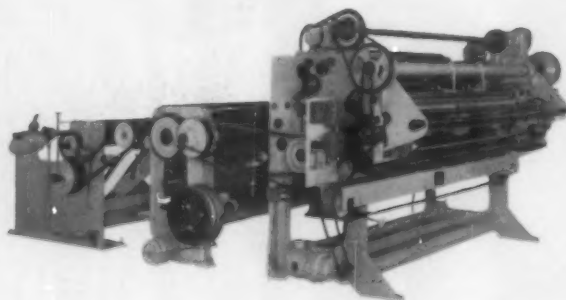


center rewriter

THE PERFORMANCE WE PROMISED

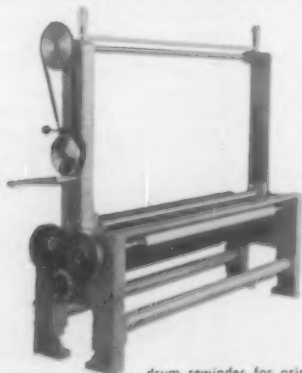


general purpose drum rewriter

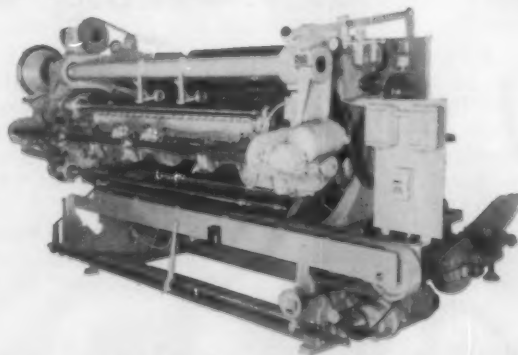


automatic rewriter for toilet tissue

ASK THE COMPANIES THAT OWN THEM



drum rewriter for printing press



automatic rewriter for wax and locker wrap

printing presses, rewinders, embossers, folders,
napkin and core machines and special converting machines

PAPER CONVERTING MACHINE COMPANY
GREEN BAY, WISCONSIN



*Here's how a
Paint Company
wraps up its packing
problems with*

PRESSEAL



No gluing, no stapling, no taping! PRESSEAL containers seal themselves when pressed firmly. Factory-treated with self-sealing adhesive that fuses when flaps are pressed together.



PRESSEAL containers travel safely. Just close and stack for shipping. These self-sealing cases are **safe-sealing cases**. PRESSEAL adhesive guards case securely during travel and loading.



PRESSEAL containers open easily . . . when flaps are simply pulled apart. No torn nails or scratched hands. No cutting—so no danger of damaging merchandise. Convenient for you . . . convenient for your dealers, too!

For Information on

PRESSEAL® *Write to*

PATENTS PENDING

GROWERS CONTAINER CORPORATION

PLANTS IN SALINAS AND FULLERTON, CALIFORNIA AND JACKSONVILLE, FLORIDA



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FLORIDA: Jacksonville, Orlando, Tampa, Lake Wales, Miami Springs • ARIZONA: Phoenix • ALABAMA: Birmingham • SOUTH CAROLINA: Greenville • GEORGIA: Atlanta



Picture of a man solving a tough packaging problem . . .

HE's doing it the new way . . . he's given the job to Bemis Packaging Engineers.

What *is* his problem? Well, it really doesn't make much difference. Bemis engineers will be pretty sure to find an answer.

For example: Shipping protection for something fragile? "Float" it in a Bemis SHIP-SHAPE,* the form-fitted, featherweight, molded cellulose container.

A soft goods item that needs sales

"oomph," protection from soiling, and other merchandising benefits? Bemis plastic packaging . . . Bemis Flip-Close,* possibly.

A product of unusual shape or size, and difficult to package? Bemis Paper Specialty Engineers will come up with an efficient, money-saving answer.

Package filling-and-closing machinery that speeds production and cuts costs? *That's* the job of Bemis Packaging Service.

In short, to an amazing number of packaging problems, Bemis can contribute experience, facilities, know-how . . . and success. What's *your* problem? Write us.

*Trademark

Bemis



General Offices — St. Louis 2, Mo.
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with **Steigerwald**
Heat Seal Labels

NO GLUE - NO WATER - NO CLEAN-UP
NO BLISTERED LABELS - NO WRINKLED LABELS
NO MESS - NO LOOSE EDGES - NO SMEARS



Label Dri Challenger
applying
STEIGERWALD
Heat Seal Labels



On flat, round, or tapered containers including

BOTTLES - JARS - BOXES - AMPULES
JUGS - CANS - BOXES - HARDWARE
DRY GOODS - SPOOLS - DISHES, ETC.

STEIGERWALD HEAT SEAL LABELS without glue save labor and result in better labeling. Regardless of the size, shape or design of the product and the label—there's a STEIGERWALD HEAT SEAL LABEL without glue for every labeling operation.

**It's well worth a phone call to investigate
labeling without glue...**



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Strike the perfect balance between
PROTECTION AND APPEARANCE!

R.O. Seals have it both ways. They are practical, giving a perfect hermetic seal. They are handsome, with their colourful designs and superb finish. Every seal is tailor-made to suit the individual bottle or jar screw thread rolled by the R.O. sealing machine. Made in three types—with Plain skirt, with Pilferproof perforated security band or with the new SecuRo contra-thread security band. Whichever type you need for your containers, you can be sure that the R.O. is the most distinctive closure for any product.



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There's a New Star in the

WRIGHT LINE



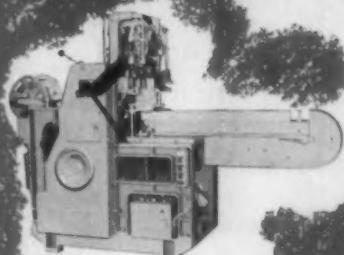
Here's bright news for multiple-product manufacturers. Now, with the Wright Junior Weigher, you can *accurately* weigh and package a variety of items and sizes without having to make complicated change-overs.

This modest-cost machine precision weighs and fills candies, cookies, crackers, beans, nuts and like items in bags, boxes, jars or cans. Weight range: one-half to 16 ounces.

Speeds up to 20 per minute. Requires only minutes for change-overs.

WRITE TODAY for detailed literature.

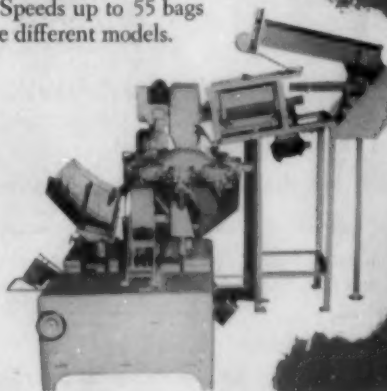
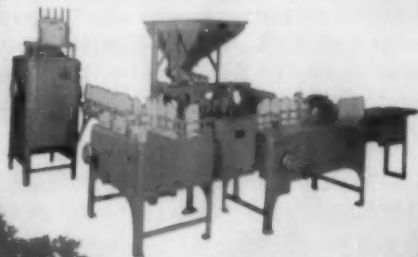
WRIGHT JUNIOR WEIGHER—No other multiple-purpose weigher in its price range equals the Junior Weigher's combination of accuracy, speed, gentle product handling and quick change-over ease.



WRIGHT BAGMASTER®—Completely automatic! Opens and positions the bag. Precision weighs and fills. Transfers bag to sealer. Speeds up to 55 bags per minute. Available in three different models.

WRIGHTWRAP®—Automatically stacks, wraps, seals and labels cracker sandwiches, fig bars and cookies. Speeds up to 120 packages per minute.

WRIGHT 2-SG CARTONER—Automatically sets up the carton, weighs and fills the product into the carton, and closes the carton. Leading candy manufacturers are among major users.



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It looks like
Expensive
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**It's Dennison's
amazing new labeling process
THERIMAGE®**

... a revolutionary package labeling technique that combines
the effect of printing with the versatility and economy of labeling.

The Therimage label is printed on a thin coating on a paper base; it cleanly transfers to the packaging material when heat and pressure are applied.

Here are the advantages of Therimage

- ✓ Easily adapted to your own packaging equipment.
- ✓ Offers outstanding appearance, better adhesion, less bulk and faster application than conventional labeling processes.
- ✓ Ideal for short runs.
- ✓ Labels may be applied to a wide variety of packaging materials.
- ✓ Solves many inventory problems by providing a means of imprinting variable information on pre-printed wrappers. May eliminate need for pre-printed wrapping material.
- ✓ Makes it possible to add special sales promotion messages, price and count charges or other information to previously printed film.

HOW THERIMAGE WORKS

A Therimage label is applied by means of an Imagraph Machine which was developed by Adolph Gottscho, Inc. It is a compact device designed for easy attachment to any standard wrapping, bundling or bag-making machine.

The entire operation is completely automatic and synchronized to position the label transfer in any desired location on the packaging material, and at standard production speeds. The Imagraph Machine is quickly and easily adjusted to accommodate various cut-off or repeat lengths that are required when a changeover is made from one wrap to another.

For more information
about Therimage, write to

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bags, Carton Liners, Bag Liners, Wrappers, Overwraps, Unit Packs, Pouch Packs and many Packaging Accessories.

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... FOR SURFACE PROTECTION of metal and glass sheets, wood paneling and doors, plastic surfaced wall and counter panels.

... FOR PROTECTION AGAINST EVAPORATION of volatile oils, greases and chemicals — against sifting loss of powders and granulars.

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A wide range of functionally treated papers in single and duplex combinations for protection against damages from weather, water, vapor, grease, oils, stain, mildew, fungus and flame — all readily adaptable to packaging needs of all types from the smallest product to the largest bulk shipment.

MR. PROTECTION

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THILCO

PROTECTIVE PAPERS INCLUDE:

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These Leading Companies

Advertise as they PROTECT!

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Funny Farmer



For just a few cents more than plain, ordinary papers, these companies and many others utilize Thilco PRINT-DECORATING on their protective packaging papers. It's the cheapest advertising you can buy because the space is free! Such identification "tells them who you are", provides quick product identity, simplifies inventory control and often saves money by eliminating costlier containers and printed accessory pieces. Most all Thilco papers can be PRINT-DECORATED, as you'd like them!

THILCO

Functional Papers FOR PROTECTION THAT COUNTS!

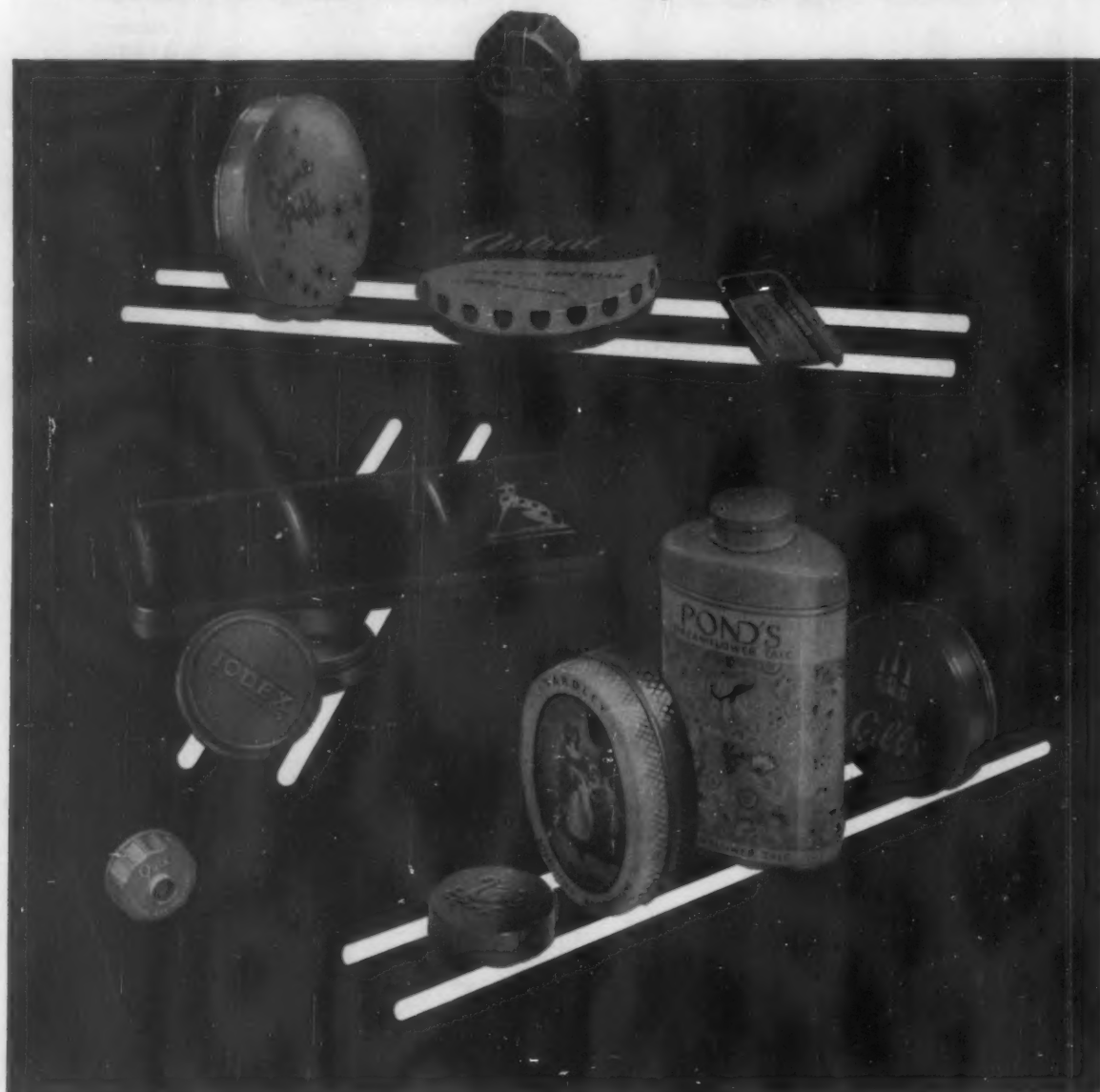
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Contains samples, plain and printed of many Thilco functional grade papers for product packaging.

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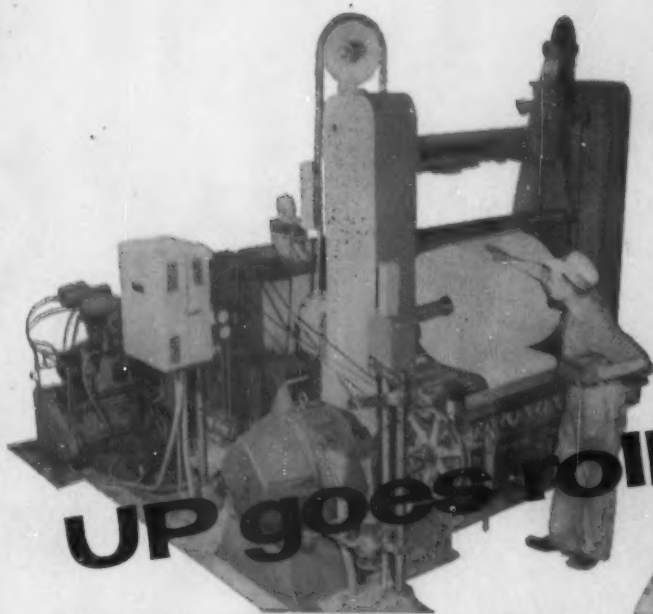
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CAMERON

Slitters and Roll Winders

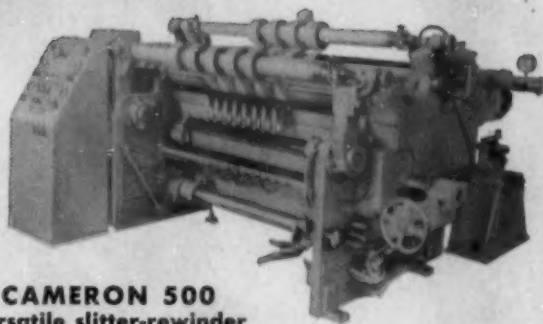
Custom-engineered by Cameron specialists

- ... to meet all production requirements
- ... to produce rewound rolls of highest quality
- ... to assure trouble-free feeding in subsequent roll finishing, printing and converting operations
- ... to increase the sales appeal of roll-wound products made for end use.



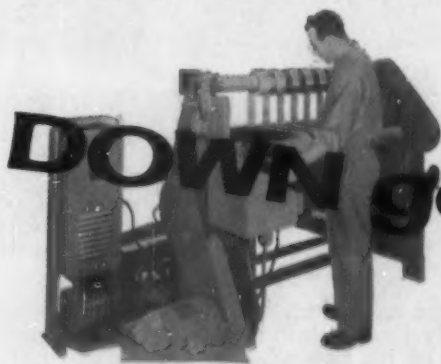
CAMERON 10
heavy duty slitter-rewinder

- ... score-cut or shear-cut slitting.
- ... speeds up to 2000 fpm*; widths 42" and 82"; rewind diameter to 40" maximum.
- ... surface rewind, with self-aligning riding roll to compensate for off-caliper stock.
- ... versatile handling of waxed, gummed, or coated paper or paperboard, textiles and rubber.



CAMERON 500
versatile slitter-rewinder

- ... quick changeover from score-cut to shear-cut or razor-cut slitting.
- ... speeds up to 2000 fpm*, widths to 62"; rewind diameter to 20" maximum.
- ... surface and center rewind, differential type, with air-loaded core friction.
- ... for plastic films, foils, papers, textiles and laminated materials.



CAMERON 550
low-cost slitter-rewinder

- ... score-cut, shear-cut, burst-cut or draw-cut razor slitting.
- ... speeds up to 500 fpm*; widths to 62"; rewind diameter to 15" maximum.
- ... center rewind, differential type, with air-loaded core friction.
- ... for plastic film, foils, papers, laminates and other materials.

*Speed is dependent upon machine width, the number of cuts, and characteristics of material.

A SOUND INVESTMENT in slitting and roll winding equipment will pay three-fold dividends:

- ... it will attract profitable new business by producing rewound rolls that meet the highest standards of quality.
- ... it will cut roll production costs.
- ... it will protect profits throughout the depreciation period by providing the most advanced design and operating features available today.

CHOOSE WISELY with the help of Cameron specialists. Let us send free literature.

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BUILT BY CAMERON'S team of specialists

AA-235



VISQUEEN Film Keeps Automatic Packaging Line at Top Speed

Trade Mark

"Film quality is the key factor in the success of an automatic packaging operation with polyethylene," says Wallace T. Cleveland, vice-president North Pacific Products Company, Bend, Oregon.

"Our production is 20,000 packages per shift in four to six sizes, and we need uninterrupted operation at relatively high speed to meet this quota. When a machine is idle for only a few minutes, or when changeovers take just a little more than the minimum required time, the downtime expense more than exceeds the petty savings that are possible when you buy inferior film on a price basis.

"We want a strong, uniform film that has good body to maintain a high speed operation. We want no ink rub-off. We want the clarity for a package that sparkles on the rack and that's tough and strong to resist handling.

"So we specify VISQUEEN film for our HUDSON-SHARP Campbell wrapping machine. We are more than satisfied with this combination of a dependable machine and a top quality packaging material."

NOTE! VISKING Company engineers will be glad to help you with your packaging problems. Just clip the information request tag, attach to your letterhead and mail.

VisQueen® film, a product of the

PLASTICS DIVISION

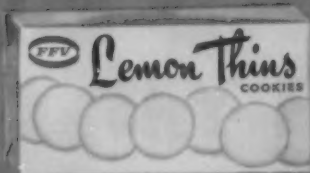
VISKING COMPANY Division of Union Carbide Corporation

A leading producer of polyethylene sheeting and tubing

P.O. BOX 1410 TERRE HAUTE, INDIANA

In Canada: VISKING LIMITED, Lindsay, Ontario





This insert lithographed by Milprint, Inc.

appetite-appealing rotogravure-on-foil packages by

MILPRINT

Next to having built-in roman candles, the surest way of attracting more shopper attention and winning greater sales for your products is with sparkling, attention-compelling Milprint foil packages—for the most faithful, most life-like rotogravure reproduction of your product you'll find anywhere! To let the creative "Milprint touch" set off a brilliant sales response for you, call your Milprint man—first!

printed cellophane, glassine, polyethylene, saran, acetate, glassine, vitafilm, "nylar" #1, foil, laminations, folding cartons, bags, lithographed drawings, printed promotional material.

Milprint ^{*}INC
PACKAGING MATERIALS

general offices, Milwaukee, Wisconsin
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*Reg. U. S. Pat. Off.



"What are we doing about uniform quality and prompt delivery of steel containers?"



"We're getting high quality from J&L ... and they have a plant near every one of ours."



- J&L steel containers provide engineered packaging for dependable transportation and safe storage.
- J&L specialists, backed up by modern research, are ready to consult on your toughest packaging problems.
- Precise fabrication and correct specification of fittings and closures.
- Prompt dependable delivery from nine plants.
- J&L, an integrated steel producer, controls container quality from start to finish.

Call your nearest J&L Container Division office for recommendations on your packaging problems. Or write direct to the Container Division, 405 Lexington Avenue, New York 17, N.Y.



Jones & Laughlin
... a great name in steel



TRY FOIL KRAFT THEY'LL MAKE A RIGID FOIL CONTAINER FOR ALMOST ANYTHING!



Got a problem? That's our meat! Especially if you're looking for a new wrinkle in rigid container packaging. Something, let's say, to preserve freshness longer ... or hike up sales through added appetite appeal.

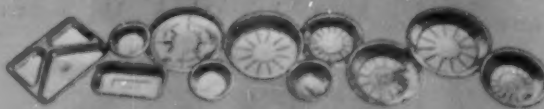
At Foil Kraft we thrive on new challenges. With us, you'll find the emphasis on **SERVICE**. Right now, for instance, experienced die engineers at both our Los Angeles and recently completed Wanatah, Indiana plants are eager to assist in developing the *right* container to meet your needs.

Want full information about ways Kaiser Aluminum's expanded facilities can help you? Just contact your Foil Kraft sales representative. And write today for our full-line catalog.

Kaiser Aluminum

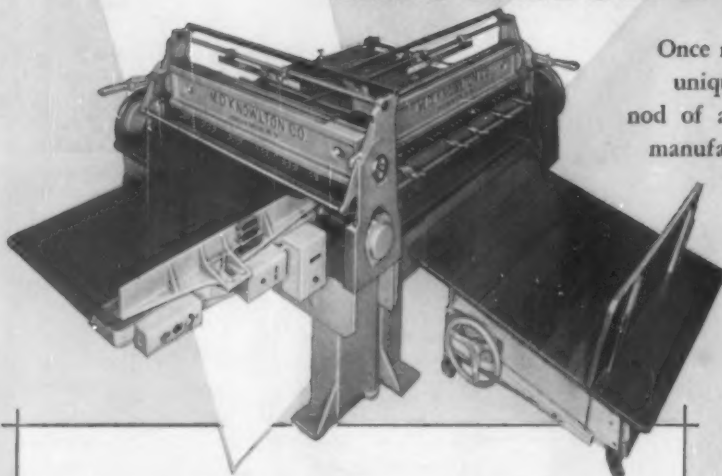
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BEFORE YOU BUY NEW SCORING MACHINERY...

Check up on this **NEW, IMPROVED KNOWLTON DOUBLE SCORER**



Once more Knowlton sets the pace with unique new features which get a quick nod of approval from cost-conscious box-manufacturers. They know that fast, accurate, uniform scoring keeps production costs on the right side of the Ledger.

They know, too, that Knowlton quality machines make for double savings—their rugged, finely engineered construction insures many years of smooth-running, trouble-free operation with maximum production and minimum outlay for shut-downs, repairs or for replacement of parts.

BRIEFLY, THE STANDARD EQUIPMENT OF THE NEW KNOWLTON IMPROVED MODEL S-7 DOUBLE SCORER INCLUDES:

- ✓ 1. FRAME IS WELDED STEEL for strength and rigidity.
- ✓ 2. 9" DIAMETER SCORING ROLLS give 28.6% more roll surface (longer life) than 7" Rolls—12.5% more roll surface (longer life) than 8" Rolls.
- ✓ 3. 9" KNIFE BARS resist deflection when scoring heavy board.
- ✓ 4. TIMKEN ROLLER BEARINGS—never a frozen or scored journal, no bushings to replace.
- ✓ 5. INDIVIDUAL FEED ROLLS, RUBBER COVERED, carried each on its own spring-mounted brackets, assure equal pull of board stock regardless of its condition or variation of thickness.
- ✓ 6. NO GEARS ON MACHINE (Separate motor and V-belt drive for each roll)—gear noise is eliminated, no replacement gears to buy and no "down time" for replacement of worn or accidentally broken gears.
- ✓ 7. SECTIONAL BRUSHES make possible replacing of worn sections.
- ✓ 8. PUSH BUTTON CONTROL.
- ✓ 9. AUTOMATIC SHEET COUNTER.
- ✓ 10. VERTICAL ADJUSTMENT on Scoring Knives.

The experience of qualified Knowlton engineers is at your disposal without obligation. Write our Rochester or any Branch Office—we'll be happy to serve you!

BOSTON
637 Massachusetts Ave.
(Arlington)

**M. & D.
Knowlton
COMPANY**

BROOKLYN
45-53 Beaver St.

CHICAGO
9 S. Clinton St.

TORONTO, CAN.
388 Dupont St.

H. W. BRINTNALL CO.
Los Angeles, San Francisco
Pacific Coast Representatives

ROCHESTER 14, NEW YORK

Exciting new holiday packaging ideas start with versatile Du Pont MYLAR®



JOHN H. BRECK, INC., Springfield, Massachusetts, transforms its standard shampoo bottle into an alluring gift with sparkling "Mylar" printed with a holiday message.



OLD FORESTER, Brown-Forman Distillers Corporation has used this smartly designed bag of "Mylar" for two years... repeated because of its popularity!



CRESTA BLANCA utilizes the excellent printability of "Mylar" to create a glamorous gold and silver gift package for its conventional champagne bottle.

Special holiday promotions may mean special bottles or decanters... expensive designs. But with versatile Du Pont "Mylar"® polyester film... your standard package now gets exciting new sales appeal at low cost!

THE REASON: "Mylar" has dazzling brilliance... prints beautifully. Glamorous overwraps of "Mylar" offer extra convenience, too. After holidays, if they choose, dealers and retailers simply remove the overwrap... sell the standard package. And, because "Mylar" is the strongest of all plastic films, it virtually eliminates package breakage.

Give your product the extra sales power of "Mylar"... for holiday or other special promotions! To get the facts, call your Du Pont Representative. Or mail the coupon below. E. I. du Pont de Nemours & Co. (Inc.), Film Department, Wilmington 98, Del.

®"MYLAR" is Du Pont's registered trademark for its brand of polyester film.



BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY

DU PONT
MYLAR®
POLYESTER FILM

E. I. du Pont de Nemours & Co. (Inc.), Film Dept.,
Room MP-6, Nemours Bldg., Wilmington 98, Delaware.

Please send me information on "Mylar" for holiday packaging.

Name _____
Title _____
Firm _____
Address _____
City _____ Zone _____ State _____

A TOUGH FILM FOR TOUGH PACKAGING JOBS

Only Du Pont offers you



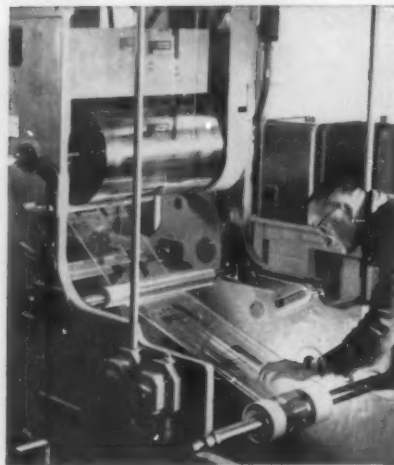
100% TRANSPARENCY

Nothing sells your product like the sight of the product itself. Crystal-clear Du Pont cellophane lets *all* the appeal of your products show through while its sparkling crispness attracts shoppers.



CORRECT PROTECTION

There's a type of Du Pont cellophane specifically designed to meet the protection requirements of your product. Du Pont cellophane films offer you an unmatched range of protection.

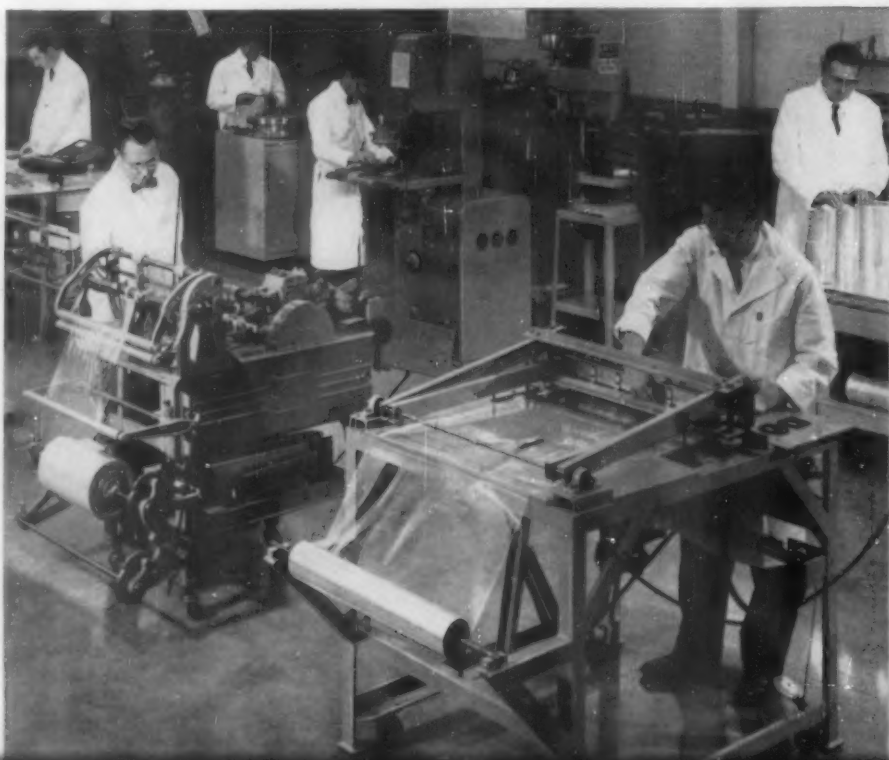


SUPERIOR PRINTABILITY

Whether printed by flexography, gravure or letterpress, sparkling Du Pont cellophane offers sharp definition with extremely high gloss for the perfect package combination of transparency and color.

A WORLD OF KNOW-HOW

At the new Du Pont Customer Service Laboratory near Wilmington you will find equipment which can duplicate operations performed in users' and converters' plants. Here, cellophane is tested by technical experts for every performance characteristic. The result is constant improvement of Du Pont cellophane and development of new types to give you better packaging.



cellophane so many advantages



HIGH-SPEED EFFICIENCY

Du Pont cellophane helps keep packaging costs low ... operations smooth. It is static-free ... has just the right amount of rigidity and slickness to speed through today's fastest packaging machinery.



WIDE HEAT-SEALING RANGE

Cellophane has the widest heat-sealing range of all transparent packaging materials. This unique property of cellophane eliminates the need for costly, close attention to heater-element controls.



OVER 100 VARIETIES

Only Du Pont offers you so many cellophane films. Specify Du Pont cellophane by code designation. That way you are sure to get the transparent packaging film which most exactly meets your needs.

**... and only Du Pont offers you
this experience and service in cellophane**

Du Pont has 33 years' experience in the development and production of cellophane ... backed by the most extensive laboratory facilities to be found anywhere. On the laboratory staff are some of the country's leading packaging experts, who are engaged in a permanent research program. Various products and various types of cellophane are tested under actual field conditions to develop even better packaging materials for you.

Take advantage of this experience and service now, by calling in your Du Pont Representative or Authorized Converter of Du Pont films. He'll be glad to help you select the cellophane best suited to your product needs. E. I. du Pont de Nemours & Co. (Inc.), Film Department, Wilmington 98, Delaware.



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

DU PONT
cellophane

**... leading the packaging field for 33 years
... designed for the needs of the future**



A STEP IN THE RIGHT DIRECTION...

NATIONAL CONTAINER CORPORATION

New York Office: 405 LEXINGTON AVENUE, NEW YORK 17, N. Y.

CORRUGATED PAPER CONVERTING PLANTS • Atlanta, Ga. • Aurora, Ind. • Bradford, Pa.
Bristol (Philadelphia), Pa. • Chicago, Ill. • Dallas, Texas • Detroit, Mich. • Jacksonville, Fla. • Long
Island City, N. Y. • Los Angeles, Calif. • Madison (St. Louis), Ill. • Memphis, Tenn. • Miami, Fla.
Milwaukee, Wisc. • Newark, N. J. • Oakland, Calif. • Salisbury, N. C. • St. Paul, Minn.

It's the step that gets you acquainted with National Container's capacity to meet your needs for corrugated shipping containers. It's the step by which you learn of all the countless ways in which National is equipped to be of genuine assistance.

From the vast acres of National's timberlands; the pulp, paper and board mills—which convert pine logs into kraft pulp, paper, and paperboard; the nation-wide network of converting plants—that transform kraft paperboard into shipping containers . . . National exercises a complete chain of quality controls for customer satisfaction.

Whether your products are fragile or enduring, perishable or permanent, infinitesimal or huge . . . National's extensive experience in *container design* is at your service. 63 Sales Offices...one near you. Consultation without obligation.



Background

for

packaging

Notes,

quotes

and comments

Another boom is coming, starting about 1960. Economic planners seem in general agreement about this. Reason: the coming-of-age of our giant wartime and postwar baby crop. Between 1960 and 1970 almost 33 million persons will celebrate their 18th birthdays and step into the market as independent consumers and wage earners. Then, at a rate of about 1.6 million couples per year, says *Sales Management*, they'll get married and create family units—buying and spending and wanting as only young families can. These are actuarial facts—not speculation—and should be considered in long-range planning for packaging production facilities for 1960 and beyond. (See this month's MP Editorial, p. 4.)

Packaging growth far outstrips the population boom. *Thomas C. Fogerty*, president of Continental Can, told stockholders that since 1939 the growth of packaging has been at a rate five times as fast as the rate of population growth and today we use almost twice as much packaging material per person as we did before World War II. According to MODERN PACKAGING's estimates, last year, on the average, \$88 was spent for packaging by every man, woman and child in the country.

Importance attached to the aerosol by the drug industry is indicated by the fact that at least two schools of pharmacy—at the University of California and the Philadelphia College of Pharmacy and Science—have inaugurated courses for the study of aerosol dosage forms.

Packaging Institute quietly adopts a new policy of alternating its annual Forum between Midwest and New York. Dates are announced for the Hotel Statler in New York this fall (Oct. 28-30); the Edgewater Beach in Chicago next year (Oct. 13-15) and back to the Statler in New York in 1959 (Oct. 26-28). The Institute will stick to its traditional October date and not hook up with PMMI's biennial Machinery Show.

Convenience appeal continues to be one of the most potent packaging sales factors. Sales of food packages featuring major built-in convenience increased by 124% between 1952 and 1956, according to *Supermarket News*, whereas competing items offering little convenience in use were able to grow only 10%, just matching the increase in population.

Is this a trend? Regular movement of fresh orange juice from Florida to packaging plants in the New York area by tanker has proved the economy of bulk shipment of liquid products for packaging at the distribution point. Petri Wine Co. plans to outfit a wine vessel to sail east by way of the Panama Canal. Heineken's brewery in Holland is already sending a part of its beer by boat for bottling in the U.S.; now Fruit Industries, Inc., has a deal in the making by which the beer boat would return to Holland with its tanks full of orange juice.

More competition looms in the polyester film field. Minnesota Mining & Mfg. challenges Du Pont's lead on Mylar by producing its own heat-sealable grade of polyester film and one of the big rubber companies is known to be manufacturing and selling a polyester packaging film, although no public announcement has been made.

More evidence that a new kind of package or a new size tends to create a new market rather than drawing from old: Big trend to half-gallon ice-cream carton (up from 378 million units in 1955 to 488 million in 1956) has had only minor effect on pint [Continued on page 44]

and quart sales; actually, it appears in the last four years to have stimulated sale of about 175 million additional gallons of ice cream.

Billion-dollars-a-day rate of consumer spending is in sight. *Walter Williams*, Under-Secretary of Commerce, points out that if American consumers continue to purchase goods and services at the same rate of increase that has occurred during the period since the end of World War II, by 1965 they will be expending \$1 billion a day, seven days a week, 52 weeks a year.

Is family-size package staging a comeback? General Mills adds 15-oz. package for Cheerios, 18 oz. for Wheaties. Today's larger families, says General Mills, create the need. Market research indicates that new sizes will increase over-all volume, not just shift business from existing 7-8-oz. and 10-12-oz. sizes.

Canco's objective is made clear by *President Stolk's* comments to press. Latest acquisition of Dixie Cup Co., he said, "is in line with American Can's program of widening its product lines in fields that hold real promise of future development." Last year Canco acquired companies making squeeze bottles and tubes, metal collapsible tubes, caps and nozzles for containers, and coatings. Mr. Stolk confirmed Canco is out to buy a paper mill and earlier he had hinted it might acquire a source of plastic resins. Thus the two big "can" companies (Continental is now fully diversified) become "package" companies.

I think it is apparent that package personality—too often thought of in terms of color, size, shape, graphic-arts treatment—must be expanded to include package function. The engineering of the package in terms of consumer convenience, safety and use, the utilization of materials and many other factors are equally important in building personality into the package."—*Donald Deskey*, designer, to the Toilet Goods Assn.

Need to educate consumers to the advantages of new convenience packages is pointed up by a recent Du Pont survey indicating that three out of four housewives, when given a choice, preferred cologne in an aerosol package—yet only 27% of cologne users up to that time had ever heard of the push-button products and, of that group, less than half had tried them. Stronger promotion of aerosols by cologne manufacturers is obviously needed.

What chance for a new packaged item in the fierce fight for space in supermarkets? Food-store buyers are now being offered an average of 24 new items per day, or more than 6,000 a year. A *McCall's* study shows that 500 products were changed each year in eight super chains surveyed. Net changes were greatest in condiments and household items.

Further gains in unit shipments of glass and metal containers and a modest dip in paperboard production are forecast for 1957 by the *Value Line Investment Survey* of Arnold Bernhard & Co. Heavy expenditures for modernization and expansion are budgeted by the container industry, the survey notes; more and more uses are being found and exploited for all types of containers and consolidations of suppliers' facilities are effecting operating economies.

Expectations of increased sales in the third quarter this year over a year ago are five times as numerous as predictions of a decrease, according to a *Dun & Bradstreet* survey of executives. Optimism is particularly marked among makers of non-durable goods. Those expecting higher prices are 10 times as numerous as those foreseeing declines.

Background

for

packaging

[Continued from page 43]

don't say paperboard ... say

KRAFIBRE®

lightness



strength



economy



versatility



THROUGH 40 years' experience, we have developed a paperboard which we believe is superior to any similar product on the market. We call it Krafibre. KRAFIBRE is strong, lightweight, economical. It is adaptable to any treatment, prints beautifully and keeps its "just-printed" freshness at the point of purchase. WE'D like to send you the new Krafibre sample book so you can see what we mean. It contains Krafibre in natural, white lined and a rainbow of colors — and shows how it takes printing. DROP US A LINE and we'll put your copy in the mail.

COLUMBIA

BOX BOARD MILLS, INC.
CHATHAM, N. Y.

40 Years of Progress



KLEEN-STIK® Labels

put your Product in the Center Ring of Selling!

Greatest "show" on earth—that's what you get when you add the proved attention-getting power of KLEEN-STIK Labels on your product or package. These modern moistureless, self-sticking labels offer a veritable "circus" of exclusive advantages that help you capture a larger share of your audience. To make *your* labels the star performers of the P.O.P. stage, give them "big top" prominence with KLEEN-STIK!

NEEDS NO WATER!
KLEEN-STIK goes up fast and easy without water, glue or tape. Simply peel backing and press into place.

GETS ATTENTION!
To roar out your sales message, print KLEEN-STIK in any number of colors—or use special Fluorescent or foil stock for extra impact.

EXTRA STRONG!
KLEEN-STIK's moistureless adhesive sticks tight on any hard, smooth surface—won't let go in spite of moisture, heat, or dryness.

TALENTED!
Versatile KLEEN-STIK adapts to any shape, or surface—"at home" on product, box, or flexible film package.

ANY SIZE!
Large or small, KLEEN-STIK keeps your brand identification and selling story in the spotlight.

WE DO NO PRINTING
—KLEEN-STIK Labels are available through your regular Label Printer, in roll-dispensed or individual split-back types.



PRODUCT AND
PACKAGE LABELS



NAMEPLATE
LABELS



INSTRUCTION
LABELS



CAUTION
LABELS



PRICE MARKER
LABELS

KLEEN-STIK Products, Inc.

7300 WEST WILSON AVENUE • CHICAGO 31, ILLINOIS

Pioneers in Pressure-Sensitives for Advertising and Labeling

See how leading manufacturers are using efficient, economical KLEEN-STIK Labels—write on your letterhead for free samples!

SNAP!...it's on!
SNAP!...it's off!



New Kimble Opticlear Snap-Cap Vials are light and sturdy, offer flawless visibility of your product, permit labeling on outside or inside.

New Kimble Opticlear Snap-Cap Vials are available in a complete range of sizes: 1, 2, 3, 4, 5, 7, 10 and 12 drams.

Now! Showcase your dry products for extra profits in **SPARKLING KIMBLE OPTICLEAR SNAP-CAP VIALS**

Speeds up packaging! Adds sales appeal! Offers greater convenience to your customers!

Insure the sales success of your dry products: package them for maximum visibility and convenience in Kimble's sparkling Opticlear Snap-Cap Vials.

The new snap-cap, on or off with a flick of the thumb, speeds up packaging. The specially tooled neck and lip assure a snug-fitting cap, minimizing

moisture-vapor transmission.

If you have a packaging problem, investigate the outstanding advantages of packaging your dry products in these economical glass containers. Mail the coupon today and we'll send you information, prices and samples of the sizes you use. Kimble Opticlear Snap-Cap Vials are made by the Kimble Glass Company, a subsidiary of Owens-Illinois.

Kimble Glass Company
P. O. Box MP-6, Toledo 1, Ohio

I would like information and samples of Kimble Opticlear Snap-Cap Vials.

Sizes needed _____

Name _____

Company _____

Address _____

City _____ Zone _____ State _____

KIMBLE OPTICLEAR SNAP-CAP VIALS

AN **①** PRODUCT

OWENS-ILLINOIS

GENERAL OFFICES • TOLEDO 1, OHIO



every product on this page



increased in sales with multiple unit



packaging in AVISCO cellophane

"TAKE SEVERAL!" says AVISCO cellophane...and shoppers do

Sales need a needle? Multi-pack your product in AVISCO® cellophane! There's just nothing like it to bring on that "might-as-well-take-several" mood in shoppers.

AVISCO cellophane shows, seals and sells. It lets folks examine what they're buying yet keeps things clean. Printing on its jewel-like

surface displays your brand name brightly and sells your product's virtues.

What's your pleasure? More sales for tobacco, candy, underwear, foods? Cash in on AVISCO cellophane's reputation as "best seller" for a thousand different types of multiple packaged products.

AMERICAN VISCOSE CORPORATION, Film Division, 1617 Pennsylvania Blvd., Philadelphia 3, Pa.

**AVISCO
CELLOPHANE**

Win, Place or Show



ONE of these horses is in a real good pocket. From here . . . with the stretch coming up . . . it looks like he's not going to make it. This gives light lie to the legend that improvement of breed is the basis for horse racing. Proof? Ask the man who has money riding. He wants a winner . . . you take the blood lines.

And so it happened to the ice cream industry around the turn of the century. As many other products already had done, this perishable delight had to get out of the kitchen and into a plant in order to compete.

It was Sealright that came up with the first, cylindrical, liquid-tight, container, and for the first time people were able to buy, carry, and store ice cream safely.

Not too long ago, Sealright topped all competition again by developing another exclusive original . . . plasticized paper. By special process of plastic-coating paper, Sealright produced a material with the strength and taste protection of glass plus the lightness and economy of ordinary paper.

Sealright's long, impressive record of firsts in the ice cream — and dairy industries — naturally has attracted attention everywhere. Today, hundreds of diverse types of industries have benefited from the advantages inherent in using Sealright containers for their products.

If you are looking for new, dramatic and profitable merchandise ideas in packaging, Sealright is ready with some of the freshest you have had in a long, long time. *Just write.*



Just Write

Sealright

There's a SEALRIGHT Creative Package Idea just RIGHT for your product . . . send for samples of NEW ideas in packaging.

SEALRIGHT CO., INC., FULTON, NEW YORK

Name Title

Company

Address

City

Zone

State

Oswego Falls Corp.—Sealright Co., Inc., Fulton, N. Y.—Kansas City, Mo.—Sealright Pacific Ltd., Los Angeles, California—Canadian Sealright Co., Ltd., Peterborough, Ontario, Canada.



HOW PRE-TESTING CUTS SHIPPING DAMAGE



Your product packaged by Gaylord can take its first trip over the road of distribution inside our laboratories. As a member of the National Safe Transit Program, Gaylord conducts unsparing tests duplicating the actual hazards of shipment.

This is only one phase of Gaylord engineering research which helps reduce shipping losses in every major American industry.

Make sure your boxes are performance-proved before they get their travel orders. Call your nearby Gaylord engineer. He likes tough challenges.

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT PAPER AND SPECIALTIES • KRAFT BAGS AND SACKS

GAYLORD CONTAINER CORPORATION ★ ST. LOUIS

DIVISION OF CROWN ZELLERBACH CORPORATION

everything you sell
deserves the protection of



Perfect protective packaging invites identification, will travel!

More Sales Power Per Package ...with Waxed Glassine

Solves tough sales-wrap puzzles as it cuts your costs! Packagers agree Waxed Glassine emphasizes product quality, assures maximum consumer convenience, stimulates more sales by brand!



THE POWER OF WAXED GLASSINE OUTER WRAPS:

- **More eye appeal**—Sparkling surface provides perfect background for brilliant, appetizing illustrations, lets you use entire package for powerful all-over sales-winning designs that prompt purchase!
- **Billboards your brand**—Every package is a billboard generating impulse sales and assuring repeat customers with its fresh, inviting look, strong appetite appeal and stand-out brand identification!

INNER AND OUTER WRAPS OF WAXED GLASSINE:

- **Extra flavor protection**—Safely seals in all that desirable just-made goodness, keeps customers coming back for more.
- **Extra freshness protection**—Self-sealing Waxed Glassine protects against moisture invasion, maintains freshness and texture best for longer shelf and pantry life. Easier to open, easier to reclose, contents keep fresh and tasty!
- **Extra grease protection**—Waxed Glassine wrappers resist penetration by fats, oils, shortenings. No more rancidity problems! Package stays clean, inviting, colorful!
- **Extra strength**—Waxed Glassine passes rugged test of delivery, in-store and consumer handling! Made stronger to stack better, it cuts down crumbling, breakage, tipped wrappers and returns!
- **Low cost**—Lower basic costs plus constant, dependable supply combine to produce an economical package that reaches out and sells!

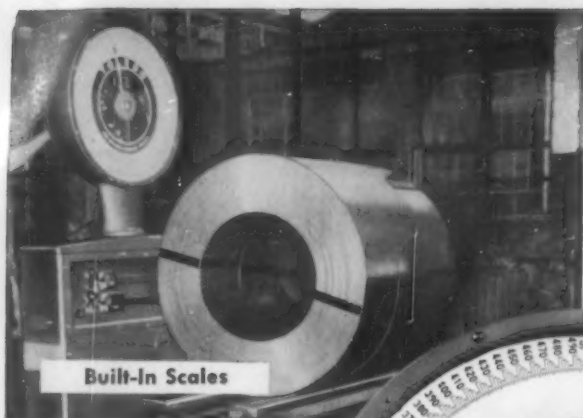


Waxed Glassine teams up with the experience, facilities and service of the nation's top converters, to give you modern packaging and product protection that pays off in bigger packaging business—and the job doesn't stop here!

Traffic-stopping designs, actual samples, proven sales ideas, complete cost sheets show how Waxed Glassine pays off in better packaging, higher brand profits! See your Waxed Paper salesman, or write or telephone us direct.



WAXED PAPER MERCHANDISING COUNCIL, INC. • 38 South Dearborn St. • Chicago 3, Ill. • Telephone: STate 2-8115



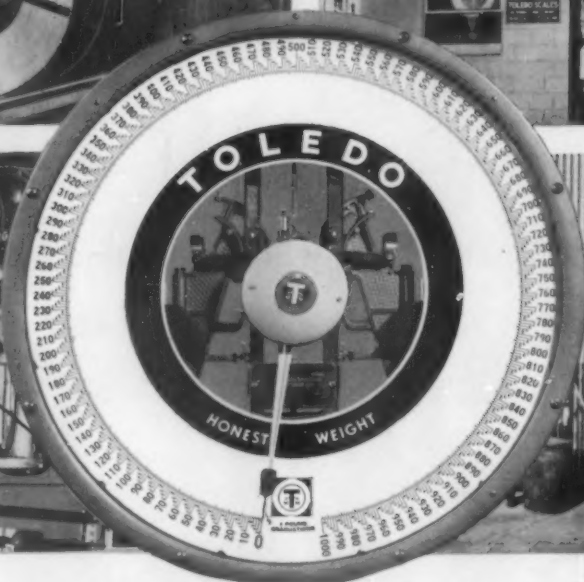
Built-In Scales



Motor Truck Scales



Printweigh Scales



Counting Scales

THIS FAMILIAR FACE . . . helps solve plant-wide cost control problems *Everywhere!*

This "face" identifies dependable, versatile Toledo scales. You'll see it plant-wide wherever managements see weighing in its true perspective—as a vital element in the overall cost control system.

This means the right scales in the right places . . . to supply basic accounting records of materials received, processed, shipped or transferred. Weight records directly affect costs, inventory, quality and customer relations. They are fundamental to sound cost control. Today's pressure on profits

calls for integration of weighing in a plant-wide weighing system.

To learn the job your scales are now doing, we invite you to send for the new Toledo Weight Fact Kit. It will help you determine how well your scales measure up as a weighing system—help you detect weighing inefficiencies that drain profits. **REQUEST YOUR WEIGHT FACT KIT NOW.** No obligation. Address Toledo Scale Company, 1410 Telegraph Road, Toledo 1, Ohio.

TOLEDO® HEADQUARTERS FOR SCALES

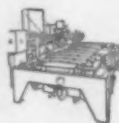
CUSTOM PRODUCTS FOR INDUSTRY



REMOTE DIGITAL WEIGHTS. Toledos automatically transmit weights to electric office machines located anywhere.



ELECTRONIC SCALES give electronic wings to weights; head may be located anywhere.



TESTING
Toledos today test a wide range of parts; this device for leaf springs.



AUTOMATIC BATCHING SYSTEMS
interlock batteries of scales.



MEMORANDUM

TO : Mr. [Name]

FROM : Mr. [Name]

SUBJECT : [Topic]

The following information was obtained from the records of the [Organization] and is being furnished for your information.

Very truly yours,
[Signature]

[Name]
[Title]

*glass
containers
move
more
food!*

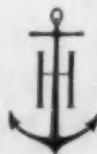


*Use Anchorglass® containers
sealed with Anchor® caps*

...because they protect the contents

CHEMICALLY INERT Anchorglass containers don't affect food flavors, taste, aroma or color. Their pouring edge is kept clean and sanitary, protected by the closure. They won't rust, corrode or leak in storage. Their transparency permits positive visual protection against slack fills. They can be effectively resealed to protect unused portions. And contents never have to be transferred to another container for protection. Move more of your products and protect their purity, freshness and true flavor in glass . . . in Anchorglass, sealed with dependable Anchor caps.

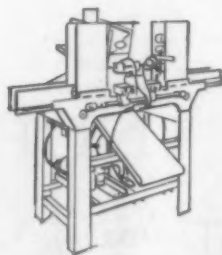
ANCHOR
HOCKING
GLASS CORPORATION
Lancaster, Ohio





IF IT COMES IN A CAN, LET
CAN BAND®, THE MULTIPACK MERCHANDISER,
 PUT OVER YOUR

INTRODUCTORY OFFERS
 SPECIAL PROMOTIONS
 MARKET TESTS



← WITH the CAN BAND LOADER, the small machine developed by CONTAINER CORPORATION, to bring you all these advantages at lowest cost—

Here are the facts:

- packs up to 50 cartons a minute
- requires no capital investment—low monthly rental
- feeds and loads cans automatically
- easy to adjust, maintain, operate

Write

CONTAINER CORPORATION OF AMERICA

38 South Dearborn Street,
 Chicago 3, Illinois, and 42 other cities

- Higher Gloss
- Stronger Color
- More Mileage
- Freedom from Blocking
- Maximum Water Resistance

...all yours when you use one
of BBD's modern multipurpose
"700 Series" Flexographic Inks
Pick the one that suits you best

	For Safety "S-700" SAFE-T-BRITE	For Speed "M-700" MUL-T-BRITE
PRINTABLE STOCKS	1. Polyethylene (treated) 2. "Mylar" and other polyester films 3. Saran-coated cellophane 4. Aluminum Foil 5. Glassine	1. Polyethylene (treated) 2. "Mylar" and other polyester films 3. Saran-coated cellophane 4. Aluminum Foil 5. Glassine 6. Plain cellophane 7. Moistureproof cellophane
PRINTING SPEEDS	Works beautifully on equipment operating at speeds to 225 fpm. Ideal for printing in conjunction with bag-making or other in-line operations	Performs efficiently on high-speed presses running at up to 500 fpm. Easily modified to dry properly on slow-speed equipment too
FLASH POINT	High flash point—far above that of conventional alcohol inks—(90° F. TAG open cup) affords unique safety factor. Requires no red labels, creates no fire hazard in use or storage	Comparable to that of conventional alcohol flexographic inks and should be treated accordingly
PLATES and ROLLERS	Natural or synthetic rubber (Buna "N")	Synthetic rubber (Buna "N")

Which one for you—SAFE-T-BRITE or MUL-T-BRITE? That depends on what kinds of material you print, and whether you print roll-to-roll or in-line with a fabricating or converting operation. But, whichever you choose, you'll get an ink with never-before-available features... an ink that simultaneously improves your printing quality and increases your production efficiency... gives greater mileage than other flexographic inks.

BBD's "700 Series" Inks give you the kind of gloss, color strength, non-block quality and water-resistance that can't be obtained with conventional flexographic inks because SAFE-T BRITE and MUL-T-BRITE are formulated

on an entirely new and different non-alcoholic solvent system. They represent an advanced concept of inkmaking that crashes through old barriers... opens new horizons of achievement for film, foil and paper converters.

SAFE-T-BRITE and MUL-T-BRITE Inks have won wide acceptance here and abroad, are now being used successfully on every type of flexographic press. Try one or both of these sensational new "700 Series" Inks and see what a difference they make. A trial run can be arranged at your convenience by contacting the BBD plant nearest you. Why not do it now?



Fact-filled "700 Series" Technical Data Sheet and printed samples available on request to Bensing Bros. and Deeney, 3301 Hunting Park Avenue, Philadelphia 29, Pa.



DISTRIBUTORS:
MANTON BROS., Toronto, Canada
TRENAL CO., Brussels, Belgium
COLORA, LTD., Bern, Switzerland
PEREZ TRADING CO., New York (Export)
PARKS, INC., San Francisco (Export)

AUTO WRAPPERS

MULTI PURPOSE AUTOMATIC WRAPPING MACHINES

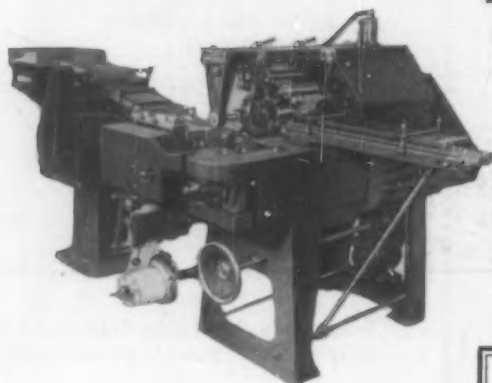
ARE SUPPLIED TO THE FOLLOWING TRADES

FOOD • TOILET REQUISITES • CONFECTIONERY
TOBACCO • SOAP, PERFUMERY & COSMETICS
ICE CREAM • PHARMACEUTICAL • BISCUIT MANUFACTURE

JUST ONE OF A WIDE RANGE OF

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TYPE "R"



TO ROLL-WRAP ALL TYPES OF TABLETS

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IN PAPER, FOIL, CELLULOSE FILM FED FROM
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SPEED 70-90 PER MIN.

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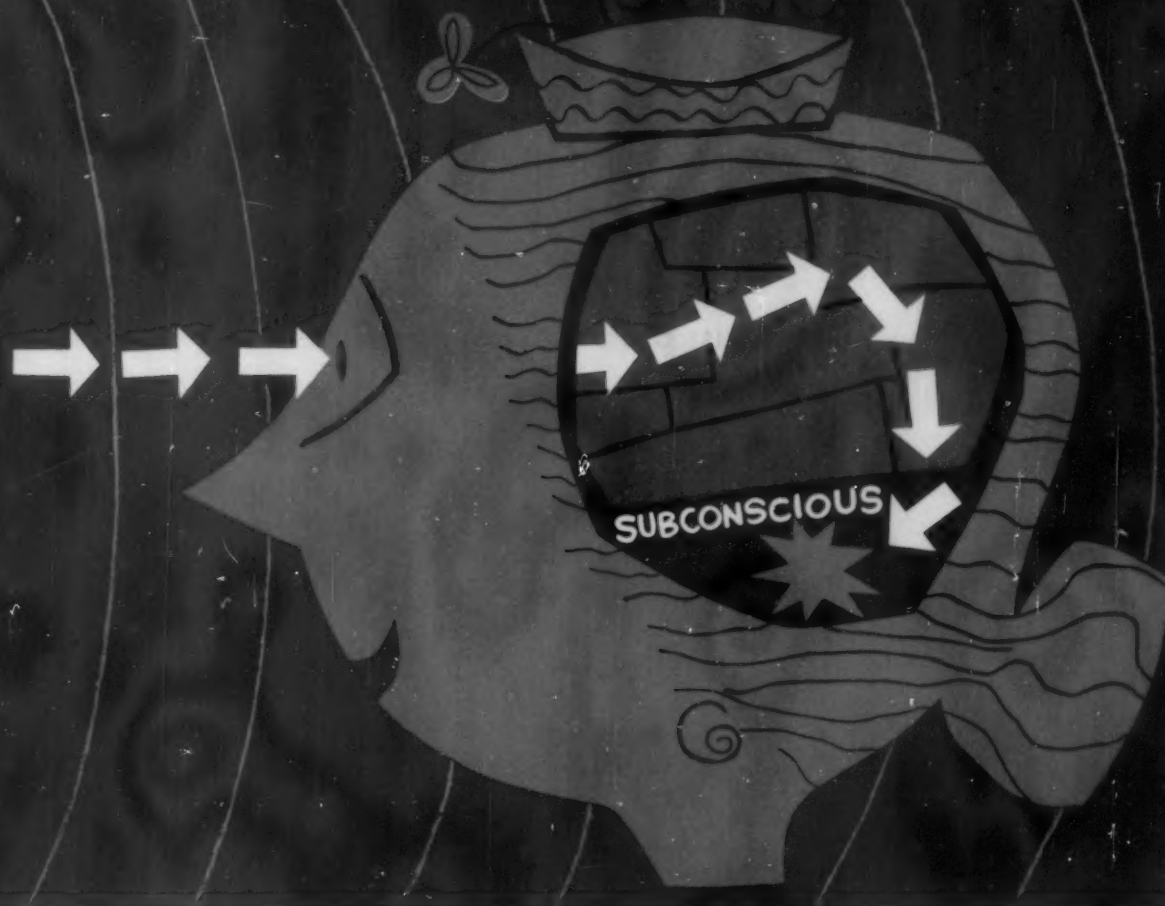
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Impulse buying is psychological!



• • • To create profitable, *extra* impulse sales, your food product wrappers must appeal instantly and favorably to a shopper's emotions . . . to her *subconscious mind*! And with Western-Waxide's proved Taste Excitement concept of package design, your products *stand out* on crowded supermarket shelves. They explode their "buy me" sales message *subconsciously*—compelling shoppers to make impulse purchases of *your* food products on the spot!

Taste Excitement scientifically combines color, brand identification and mouthwatering serving suggestions into a "package personality" for your food products. To create *extra* impulse sales, bring your packaging problems to Western-Waxide or consult a qualified independent package design expert.

Increased Sales...by Design!



Manufacturers or converters of plain and printed waxed paper; foil; foil laminates; polyethylene coated paper and poly-film laminates; films; bags; pouches and other specialized packaging materials.

CROWN ZELLERBACH CORPORATION

WESTERN-WAXIDE SPECIALTY PACKAGING DIVISION

PLANTS AND SALES OFFICES: SAN LEANDRO AND LOS ANGELES, CALIFORNIA • NORTH PORTLAND, OREGON • ST. LOUIS AND KANSAS CITY, MISSOURI
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in the history of psychology

1. The history of psychology

The history of psychology is a long and complex one, spanning centuries and cultures. It is a field that has evolved significantly over time, from its roots in ancient philosophy and medicine to its modern status as a scientific discipline. The history of psychology is a story of discovery, debate, and the gradual accumulation of knowledge about the human mind and behavior. It is a field that has been shaped by the work of many great minds, from ancient philosophers like Aristotle and Plato to modern psychologists like Sigmund Freud and B.F. Skinner. The history of psychology is a testament to the human desire to understand ourselves and the world around us.

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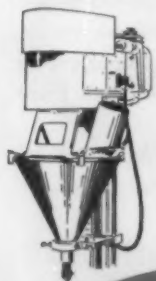
Versatile Packaging Line!



BARTELT

High Speed Automatic Packaging

Versatility is one important feature of the High Speed Bartelt Packaging Line, now in use packaging many of the best known national brands. The basic line (1) makes a bag from a roll of paper, film, or foil; (2) fills the bag accurately; (3) heat seals safely; (4) it can also set up cartons, insert the desired number of pouches and many premium items, glue and tuck ends. Bartelt also makes the Checkweigher and Filler shown below. All are fast, automatic, and designed for long years of operation with low maintenance. Write for complete information.



FILLER

The Bartelt Filler is a device for accurately measuring and dispensing a predetermined volume of powder, granulated solids, viscous materials, semi-liquids, or liquids.

CHECKWEIGHER

Bartelt Checkweighers are capable of handling packages up to 4 1/2" x 7 1/4" base size, and cans or glass jars up to 5 1/2" in diameter. Normal weight range is up to 2 lbs. Detects accuracy at a predetermined range of plus or minus one gram.



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Creative Packaging"*

Mosstype Money-Savers for Flexographic Printers

Cuts plate roll costs in half



"D-MOUNT"[®] Rubber Plate Cylinder

New! Different! Better! A simple 2-part plate cylinder assembly that combines a featherweight sleeve and an interchangeable shaft. Foolproof system enables you to mate sleeve and shaft in shrink-fitted integral grip . . . disassemble them at will. No skill required . . . takes only a few minutes to assemble or disassemble. *Always* accurate, *always* concentric . . . shaft automatically centers itself in sleeve bore *every* time.

"D-MOUNT" Cylinders cost less than conventional shafted rolls because they use a common shaft that is interchangeable with other "D-MOUNT" Sleeves. Their lighter weight permits you to run at faster speeds . . . makes them easier to handle. Take up much less storage space too.

Available as bare rolls for mounting plates in your own plant . . . or with vulcanized rubber coverings of all-over and continuous designs.

Write for illustrated
"D-MOUNT" Bulletin . . .
and details of our no-risk trial plan



MOSSTYPE and "D-MOUNT"
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- MOLDED RUBBER PRINTING PLATES
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- RUBBER PLATE MOUNTER-PROOFER MACHINES

Saves up to \$15,000 a year



Rubber Plate MOUNTER-PROOFER Machine

This auxiliary pressroom unit is now standard equipment in hundreds of quality-minded, cost-conscious converting plants. Used for plate-setting, makeready, proofing and cylinder-checking, the MOUNTER-PROOFER enables you to prepare jobs in advance . . . know they are ready to run the minute they go on the press. Delivers accurate color proofs . . . invaluable as guide to all personnel involved with job and as proof for customer approval.

Owners report savings of up to \$15,000 a year (based on using MOUNTER-PROOFER an average of 3 hours a day) in press-time . . . *plus* important ink and stock savings. Assures better print quality and closer register too.

Easy to operate . . . the MOUNTER-PROOFER can be used with "D-MOUNT" or conventional shafted cylinders, and demountable cores.

Write for illustrated MOUNTER-PROOFER bulletin

A pioneer in the development of modern flexographic printing, MOSSTYPE is the largest maker of rubber plates in the world. Our fully-integrated organization includes complete art, pattern engraving, plate-molding, mounting and cylinder-making departments under the same roof . . . serves converters and package printers all over the globe. We will be glad to send informative literature about our services at your request.

You'll make **MORE PROFIT** *with*
CENTRAL FIBRE *Packaging!*



See **CENTRAL FIBRE** *for Dependable Protection!*

Your product is assured the best possible protection in shipping and storage when it's protected by Central Fibre packaging—and product protection is also profit protection.

As a consolidation of some of the oldest paperboard mills and plants in America, Central Fibre represents a considerable wealth of skill and know-how. Central Fibre's unusual growth in recent years reflects its great vitality.

Let us show you how Central Fibre can convert this know-how and vitality into better protection for your product and better profit protection for you.

**CENTRAL FIBRE
SERVES AMERICA
FROM 21
CONVENIENT
CITIES**

PAPERBOARDS AND SPECIALTIES
CORRUGATED SHIPPING CONTAINERS
FOLDING CARTONS AND SET-UP BOXES
EGG PACKING MATERIALS
POULTRY HOUSE SUPPLIES
MAPES MOLDED PULP PRODUCTS



More Than 80 Years of Continuous Service and Progress

CENTRAL FIBRE PRODUCTS COMPANY

General Office, Quincy, Illinois



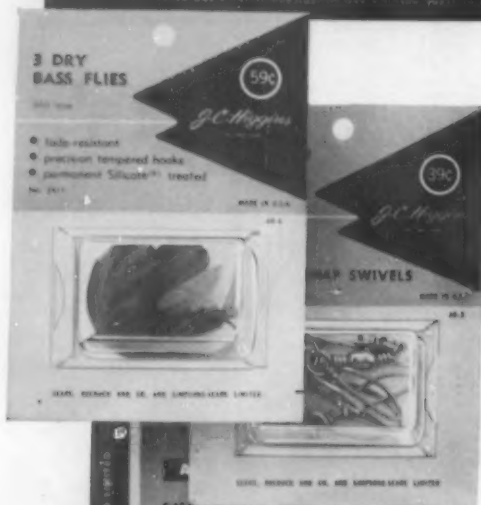
Sears puts a Celanese



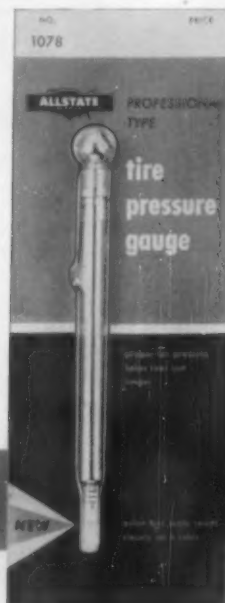
Vacuum-forming with Celanese acetate sheeting fits merchandising needs like a glove

Vacuum-forming with tough acetate protects merchandise against handling and shipping. It offers an easy solution to the merchandising of multipart products... it reduces stocking problems.

There's no finer packaging material than acetate for vacuum-forming! The full transparency of sparkling acetate stimulates interest, helps accent quality, helps promote impulse buying at the counter. No other packaging material can do as good a selling job!



PACKAGES BY PAPER PACKAGE
COMPANY OF INDIANAPOLIS
FOR SEARS, ROEBUCK AND CO.



Celanese
ACETATE SHEETING

Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Avenue, New York 16, N. Y.

lot of stock in acetate

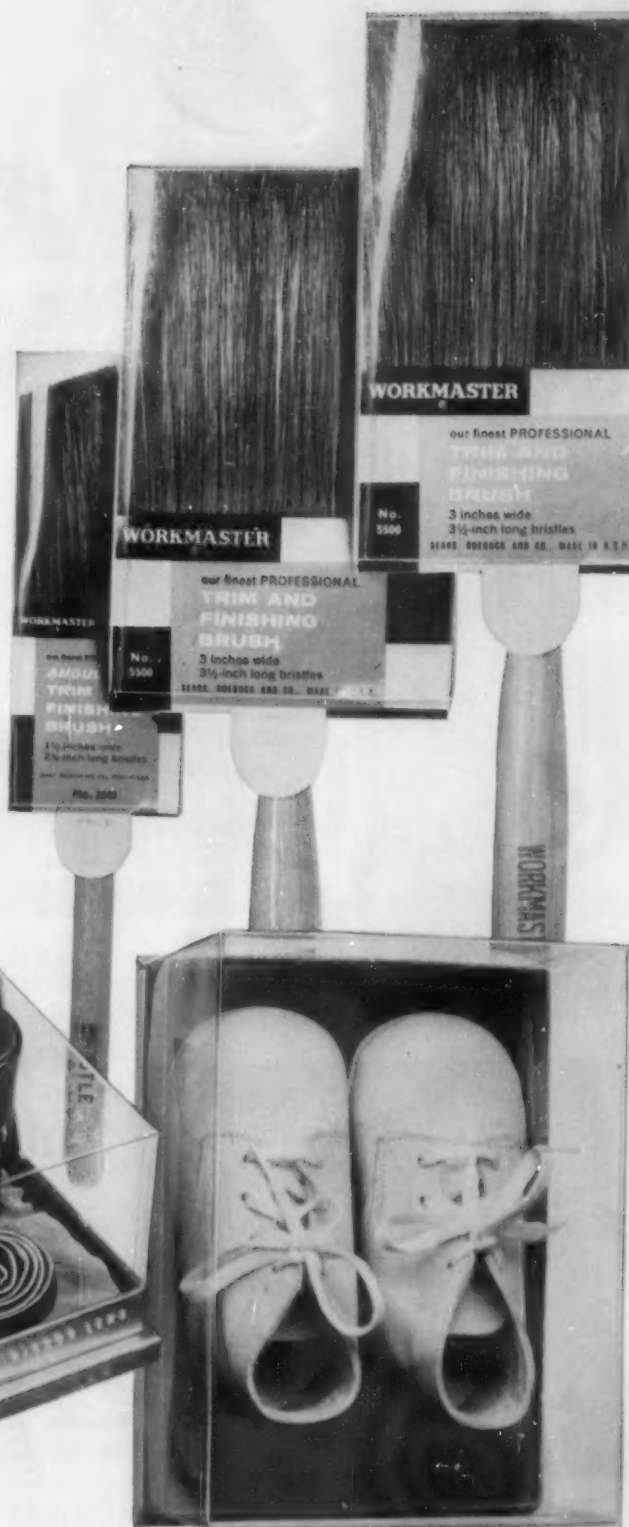
Transparent acetate containers let merchandise speak for itself

Sears' self-selection policy helps move over 100,000 items, from farm equipment to children's shoes. That's why Sears prefers Celanese acetate—its sparkling transparency helps move merchandise faster!

Celanese acetate provides a lustrous surface free of distortion, a sparkling transparency that emphasizes color, texture, detail and the quality of merchandise. It's the finest packaging material available for transparent containers.

Put your products heads and shoulders above competition—enlist the aid of Celanese acetate and the packaging versatility it affords the package designer. Write for Acetate Sheeting Booklet. Celanese Corporation of America, Plastics Division, Dept. 108-F, 744 Broad Street, Newark 2, N. J. Canadian Affiliate: Canadian Chemical Co., Limited, Montreal, Toronto, Vancouver.

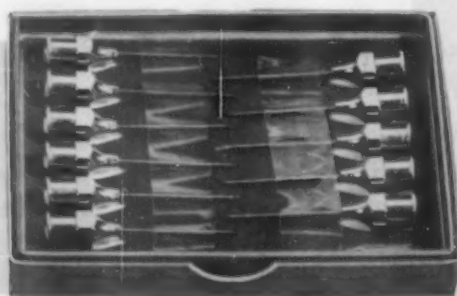
Celanese®



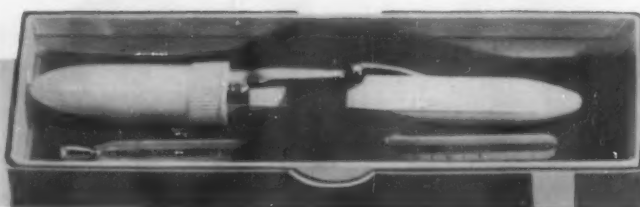
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for distinction
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Canisters, round and square set-up boxes for every purpose

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THE SUPERIOR COLOR CONCENTRATE FOR EXTRUSION MOLDING

From pellet to product, UNICOLOR is the color concentrate that adds a whole new dimension to the marketing of plastic goods . . . COLOR-IMPACT.

UNICOLOR actually forms a molecular bond with the thermoplastic involved. It should be fused by diluting at a ratio of twenty-four to one.

The result is a color-rich thermoplastic material ready to do the job of capturing the eye of the consumer with its compelling sales appeal.

See how UNICOLOR can do a job for you. Westchester Plastics, Inc. can serve you with thousands of specially matched colors in polyethylene and most other thermoplastic materials, in uniform pellet form, ready for extrusion molding. Advise us of the resin you intend to use and the color you require. We will forward a sample for evaluation by your staff.

remember! the color makes the SALE!

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Custom Compounders of Polyethylene Molding Powder and other Thermoplastic Materials
Manufacturers and Developers of Unicolor and Formacolor

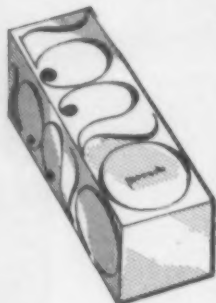
*Pliothene, Formacolor, Unicolor® T.M. Reg. U.S. Pat. Off.



FOSTERING THE UNENDING REVOLUTION IN OUR MERCHANDISING HABITS

new packaging designs

—new specification adhesives



Each new development in package design, in packaging materials, and in packaging machinery constantly changes our selling habits. New lines of merchandise get packaged, frequently with a change in the unit sale and even in the sales outlet.

The foil folding box is one of the newer developments in modern packaging. The foil may be on the outside of the box—for beauty—for a superior printing surface—for moisture protection; or it may line the inside of the box.

Continental Can Company's Boxboard and Folding Carton Division, a part of the former Robert Gair Company merged in Continental, has been a leader in packaging designs from the first packaged soda crackers to the modern folding boxes pictured above. In these attractive and effective containers, Continental uses specific Arabol Adhesives—both for side-seam adhesion and for lamination of foil to paperboard.

By the use of a specification Arabol Adhesive, Continental is able to eliminate the scuffing wheel on the straight line gluer, and consequently increase production. This same side-seam adhesive, for which patent is pending, produced the desired degree of moisture and heat resistance on the finished carton.

Another Arabol specification adhesive (patent also pending) successfully performed the difficult lamination of foil to paperboard. The exceptionally

good results of this final adhesion demonstrate Arabol's ability to meet the severest of specifications.

The adhesives manufacturer must be able to keep pace with all new developments. If the adhesive fails you have, at the worst, spoilage and leakage—at the least, a ragged, messy package which is no asset to your public relations program. Your whole investment in packaging—from design to materials and machinery—is largely dependent on your choice of adhesives.

This does not mean that adhesives are any more temperamental than most other materials. The point to note is that adhesives are many and varied—and adaptable. However, after more than 70 years of pioneering, we operate in the belief that, for any given application, only one adhesives formula can serve you best.

Consider all the possible variables—the board, the paper, the foil, the speed of

the machine, the temperature and humidity in your packaging department. Now add all the conditions your finished package will meet after it leaves your plant—in transit, in storage, in distribution to the consumer, in use by the consumer.

Your adhesives should be formulated to meet all these conditions. They *can* be—and at very low cost. The difference between run-of-mill adhesives and *specification adhesives* is fractions of pennies for every thousand packages—many dollars in performance and satisfaction.

We invite you to let us submit samples of adhesives for you to test in your own plant—under your particular working conditions—until you find the formula that best meets each of your requirements. That is the one kind of testing that assures you of continuously satisfactory results.

May we send you a folder, "How To Buy Adhesives", listing 23 basic yardsticks that let you know when you have the right adhesives? Kindly address your inquiry to Department 62.



THE ARABOL MFG. CO.

... a nationwide organization
serving major users of industrial adhesives

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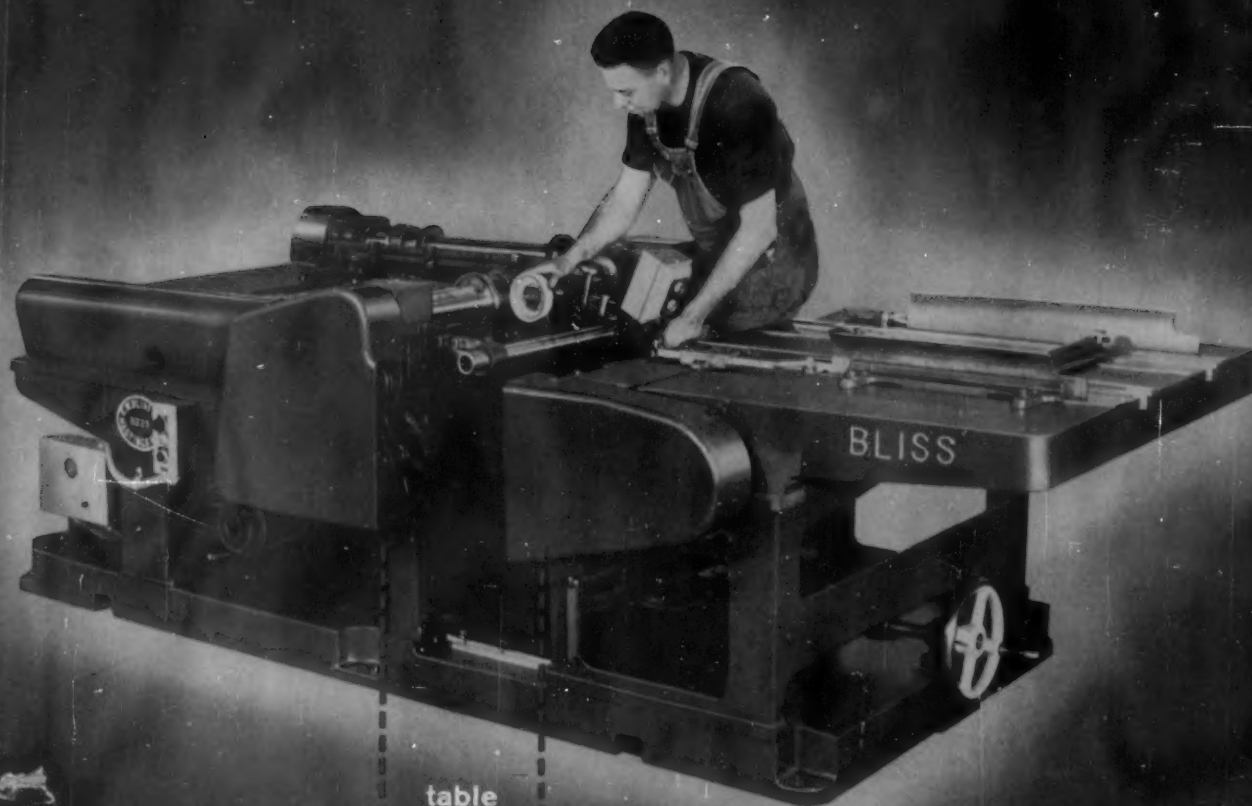


table
retracts
almost

← 2' →

Only this new Bliss Duplex Slitter can save you so much time

You can slash hours off every cutter regrind with this new slitter. That's because the first table retracts almost two feet—lets you get right in at the cutters. Simply attach the motor-driven grinder, then sharpen the cutters in place.

This accessibility also simplifies set-ups and changeovers. And making things even easier is the exclusive design of the bearing housings—they're quickly removed, easily replaced. The

side and back gages, too, are easy to reach and adjust, speeding up the entire process.

In short, Bliss' new duplex slitter cuts the heart out of downtime. It saves hours every time you sharpen or set cutters. Whether you slit body blanks or trim and square tinplate, you'll like the accuracy and speed of this most modern of slitters. For complete information write for a copy of our new slitter catalog.

100 years of making metal work for mankind



E. W. BLISS COMPANY

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Your packaging showmanship begins at Dow

Show it in **STYRON** and sell it!

It has to be *seen* to be sold. Here is packaging that does your selling where it counts . . . right at the point of sale.

Distinctive plastic containers made of Styron® put your product on display to clinch more of those lucrative impulse sales. And their complete protection en route and on the counters guards the freshness and flavor that assure repeat sales.

Time to give your product a sales lift? Then let Dow Packaging Service help you put the showmanship in your packaging that means a fast-moving, sell-out performance.

The Dow Chemical Company does not fabricate finished packages, but rather is a raw material supplier to leading manufacturers.



*Show it in **SARAN WRAP** and sell it!*

Never has flexible packaging done so much for flavor . . . for freshness . . . for sales!

The sparkling beauty and satin softness of Saran Wrap® give no hint of its toughness and protection. And its transparency puts on a show of appetite appeal shoppers can't resist.

The Saran Wrap hallmark of protection on your package tells homemakers you're giving them the best. Dow Packaging Service is ready to help you design the right package for your product. Write today! THE DOW CHEMICAL COMPANY, Midland, Michigan, Packaging Service PS1513E.

*Trademark of The Dow Chemical Company

YOU CAN DEPEND ON

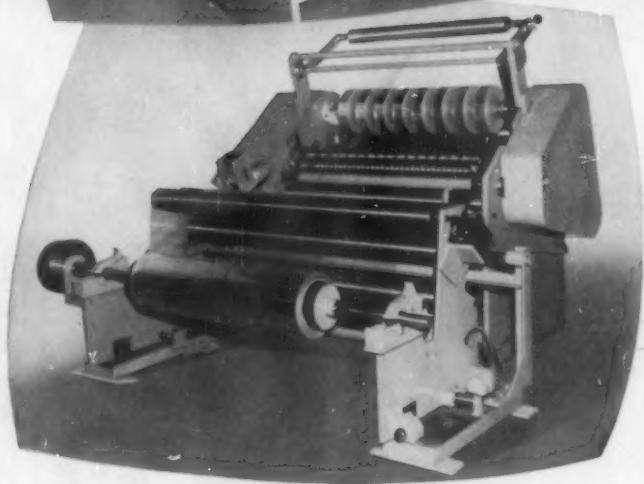
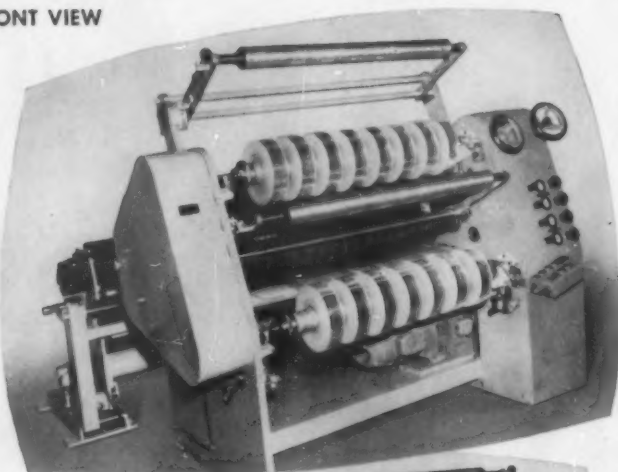




*Proved best for
efficient service
and performance!*

**MODEL 635
SLITTER AND
REWINDER**
in combination with
**MODEL 704
UNWINDER**

FRONT VIEW



BACK VIEW

The 635/704 combination has thoroughly proved itself in production. Extremely accurate edge guiding on the 704 unwind and highly sensitive tension controls on both the 704 unwind and 635 slitter-rewinder enable an operator to secure maximum yield from ANY mill roll.

SPECIFICATIONS

MODEL 635 WEB WIDTHS THROUGH 62"
REWINDS AVAILABLE FOR 1" THROUGH 6" I.D. CGRES
WEB SPEEDS TO 1,200 FPM (Depends on machine widths, slit materials and drive)
MINIMUM SLIT WIDTH $\frac{1}{8}$ " REWIND DIAMETERS 13 $\frac{1}{2}$ ", 18", 24"

MODEL 704 UNWIND
DIAMETERS THROUGH 42" WEB WIDTHS THROUGH 62"

* On special applications score cut can be provided

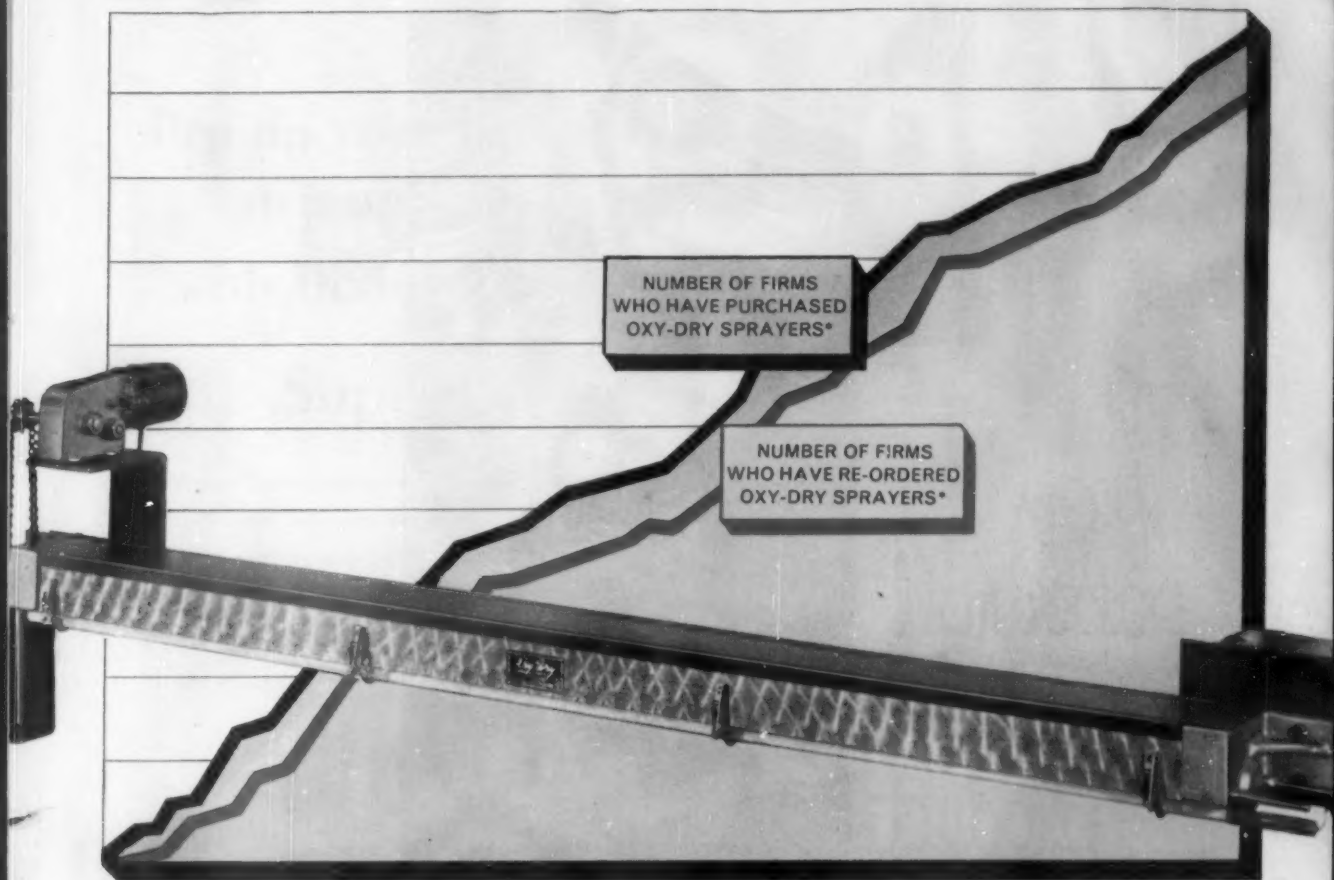
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**FILM, FOIL,
TAPE, PAPER**
• **SHEAR CUT**
• **RAZOR BLADE**
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The successful operation of OXY-DRY* sprayers in leading printing plants that resulted in 89% repeat orders for OXY-DRY* sprayers is indisputable evidence of the superiority of OXY-DRY* sprayers over any other offset prevention equipment.

This outstanding achievement is further demonstrated by the number of customers who have installed not just 2, 3, 4 or 5 OXY-DRY* sprayers but as many as 57 units.

OXY-DRY* sprayers are in daily operation in 41

states, Canada and many foreign countries. OXY-DRY* sprayers are used in every branch of printing including the rapidly growing plastics packaging field.

Repeat orders and the growing number of printers who purchase OXY-DRY* sprayers tell an amazing user satisfaction story. To keep up with competition, investigate the profit possibilities of OXY-DRY* sprayers for your plant. Write, wire or phone us today for more information or a plant survey.

*FULLY PROTECTED BY U.S. PATENTS.

OXY-DRY sells profits to printers

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from
paper roll
to finished
product
in...



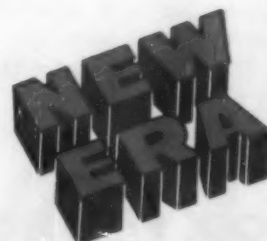
operation!

on a NEW ERA flat-bed letterpress

ALL TYPES OF LABELS—with any stock; gummed, heat-seal silk, cotton, etc.
PRESSURE SENSITIVE LABELS—die-cut to backing sheet and stripped of waste.
ALL TYPES OF TAGS—merchandise, shipping, manifold, etc.
BAG HEADERS—with any type of stock. Also specialties, forms, tickets.

- Prints any number of colors in a single run.
- Prints one or both sides at the same time.
- Die cuts any size and shape with steel rule or male and female dies.
- Prints any type of label or tag material including pressure sensitive, heat seal, gummed, ungummed, paper, board, silk, cotton, etc.
- Slits, perforates, numbers, punches, eyelets and patches reinforcements—as it prints.
- Delivers finished product cut-off, rewound, or zig-zag folded.
- Up to 7500 impressions per hour!

Write today on your letterhead for free New Era bulletin!



MANUFACTURING COMPANY
 371 Eleventh Avenue, Paterson, N. J.

Pep up your package...
step up your sales...
with Dixie's *New*
Super Sheen

A Super Sheen packaged product stands out on any shelf. Manufacturers who use bags or overwraps for their products have reported amazing sales increases when they changed to Dixie's SUPER SHEEN.

Call or write today for details on how SUPER SHEEN can pep up your package and step up your sales.



What Is Super Sheen?

Super Sheen is Dixie's newest and finest development for the utmost protection to your product and increased sales appeal to your package. It has been perfected by Dixie's team of Packaging Specialists.

Super Sheen is a custom built bag of duplex wax construction . . . either 25/37 lb. or 35/47 lb. outside bag with 25/28 lb. liner. The inner liner is constructed of Dixie's famed FRESHEEN, a superior waxed glassine. The outer bag is composed of a new improved opaque waxed paper with a long fibered base pulp that eliminates brittleness.

Wherever **Super Sheen** has been market-tested users are enthusiastic. And rightly so. For this new bag has been custom-developed to give your product the highest degree of beauty and protection that is scientifically possible.



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Wax Paper Company

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PACKAGING PROBLEM



Do you feel close enough to your metal package supplier . . . is he a part of your organization, thinking for you, planning for you, working for you? Your success is of utmost importance to us. Your continuation of business with Heekin is the goal of everyone in the Heekin organization.



Cochran Foil Carton Board...



for Every Packaging Need!

When a folding carton solves your packaging problem, Cochran, as a result of its foil carton board development program, can help you choose the stock that best satisfies the requirements of your product.

Suitable for letterpress, offset or gravure printing, Cochran foil carton board is available from 15 pt. to 30 pt. in rolls up to 54" wide by 60" O.D. or sheets up to 54" x 72".

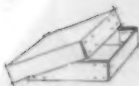
Let us discuss the applications of foil carton board with you. Write for "Meet Cochran Foil", 1430 S. 13th St., Louisville 10, Ky., Dept. F-6.



Cochran **FOIL COMPANY**
Incorporated

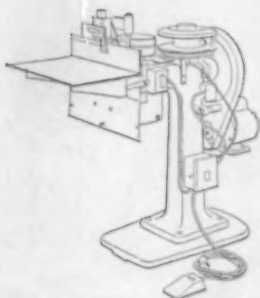
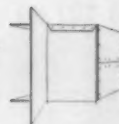
PLAIN, LAMINATED, COLORED AND COATED FOIL FOR
PACKAGING AND INDUSTRIAL APPLICATIONS • COILED ALUMINUM SHEET

WATCH COCHRAN FOR NEW DEVELOPMENTS IN FOIL

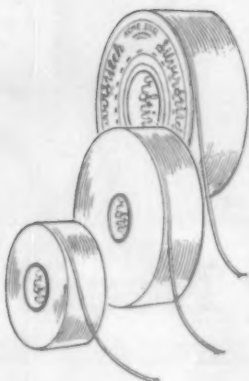


CLOSURE IDEA BULLETIN

For Users of Fibreboard Boxes

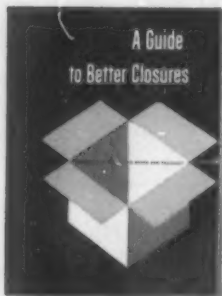


Acme Steel Model HOHT Silverstitcher closes both tops and bottoms of loaded full overlap boxes efficiently and securely. A penetrating power-driven clincher enters at the box edge behind both flaps, forms a secure stitch and retracts automatically. Model HOHT is particularly effective in closing long, narrow boxes economically. Model HOHT also fastens 5-panel folders and some double and triple slide boxes.



The gauge accuracy and smoothness of Acme Steel Silverstitch Stitching Wire prolongs machine life and precise level winding promotes smooth, high-speed feeding. Insure extra life and steady production for your stitching machines by ordering Acme Steel Stitching Wire in 10, 25, or 50-pound coils.

Arcuate Wire Stitching, an advanced method developed by Acme Steel, greatly increases the driving strength of stitches. Arcuate gives you trouble-free, continuous stitching ...with minimum machine adjustment...even under hard usage and sustained high-production operation. And Arcuate can be ordered on all new machines or obtained with a simple conversion kit for older stitchers.



Acme Steel recently published an informative 20-page handbook, "A Guide To Better Closures", which provides a ready source of box closure data. Send for your copy.

Call your Acme Idea Man on any problem in closing boxes. Call him at the nearest

Acme Steel office, or write: Dept. MDW-67, Acme Steel Company, Chicago 27, Illinois.

ACME STEEL WIRE STITCHING

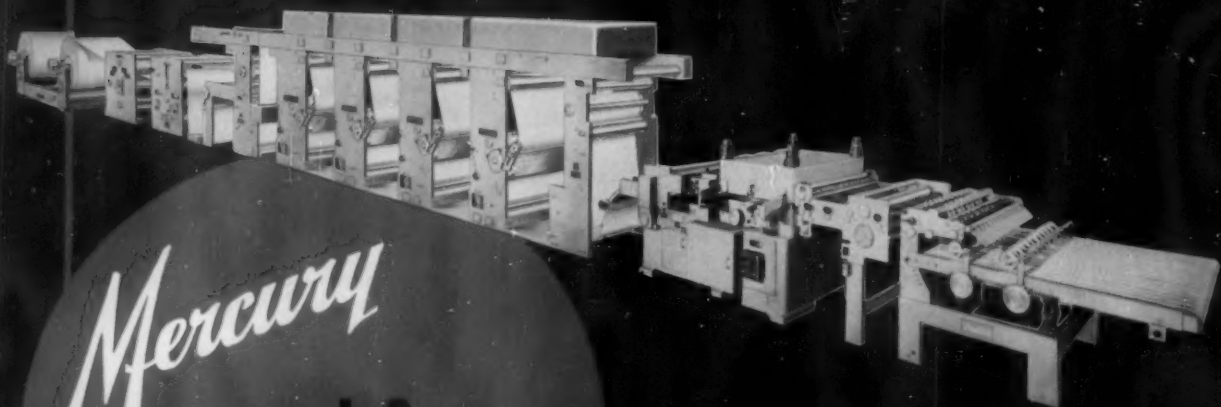


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CRAFTSMANSHIP

MERCURY MACHINES—PACE SETTERS FOR THE FOLDING CARTON INDUSTRY

NOW!ROTOGRAVURE PRINTING OF FOLDING CARTONS THE "Mercury Way"



Mercury

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Rotogravure Folding Carton Machine

Available with either right or left hand
web flow, in 28, 36 or 44 inch web width.

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- The "walk-in" press, with full accessibility. Ample standing room between colors. A press designed for men, not midgets.
- Performance-proven web control. Positive center guiding at in-feed with constant unvarying tension through printing section.
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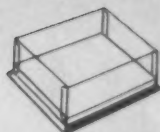


STOP and THINK

... and you'll buy

Taber

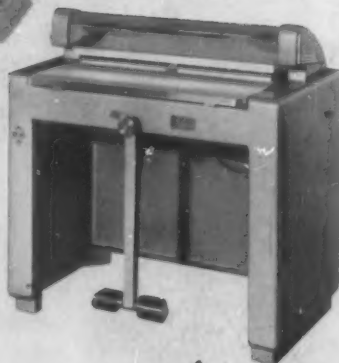
**SHEET PLASTIC
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SAVE LABOR! SAVE MATERIAL! Taber equipment is so precisely engineered that rejects are reduced to the bare minimum... thus saving you countless dollars in wasted materials. In addition, the higher production speeds and many exclusive automatic features of Taber equipment creates substantial savings in labor. So... **STOP and THINK!** Don't you owe it to yourself to get all the facts on Taber before you buy?

NEW 30" THERMATIC FOLDER, MODEL 178

A dual purpose machine; makes U-type, 180° folds similar to the "Model 103 Thermofolder" but has a longer blade permitting the folding of material up to 30" in width. Requires small amount of compressed air. Can be set up and used as a creaser by changing the blade and moving a toggle switch to the "off" position which renders the actuated power pinch-bar inoperative.



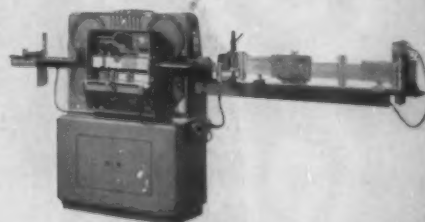
18" THERMOFOLDER, MODEL 103

Forms U-type, 180° folds, with sides tight together or opening up to $\frac{1}{8}$ ". Provides controlled folding cycle that enables average operator to produce 700 or more folds per hour on material .005" to .015" thickness up to 18" wide.



DUPLEX - STRAIGHT EDGER, MODEL 144-2

Simultaneously beads both edges of cut sheets or roll material .005" to .015" in thickness with the same or different type bead shapes and is adjustable to accommodate material in widths from 2" up to 20".



CONTINUOUS TYPE FOLDER, MODEL 172

Designed to make double-fold card protectors and wallet inserts up to 3" wide and 12" in length. Capacity — .003" to .010" transparent thermoplastic roll material. Features adjustable electric cut-off for automatic operation.

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Illustrated Literature
TABER INSTRUMENT CORPORATION
SECTION 12

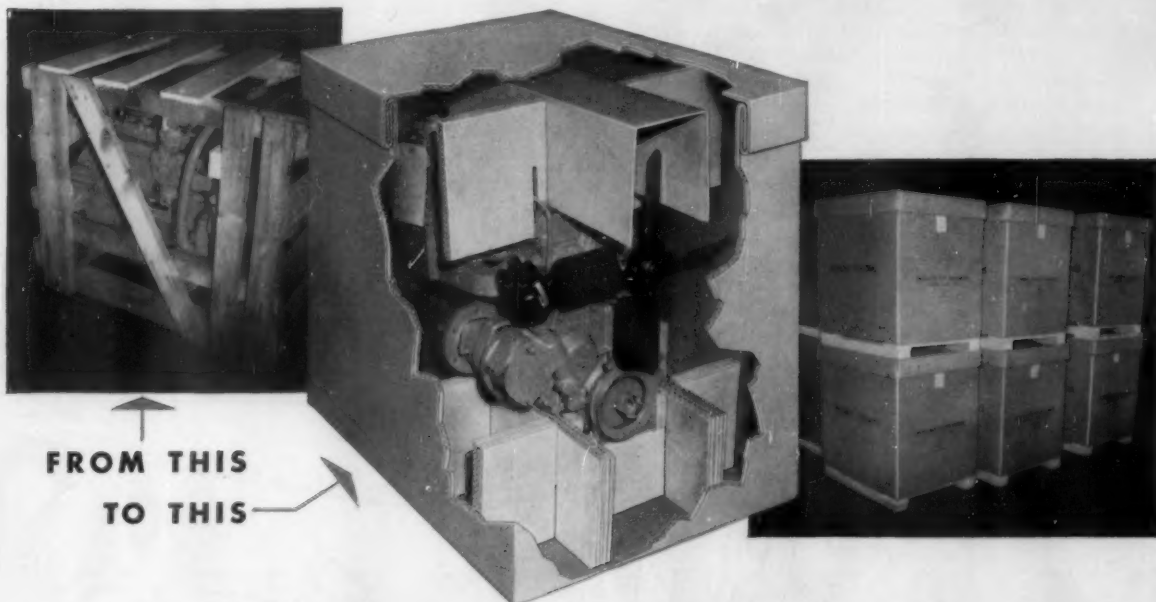
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- 8" Thermatic Drawpress, Model 146
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Result: *Inland* **SAVED 100 Pounds SHIPPING WEIGHT PER UNIT for this Customer***

● This 525-pound, 6-cylinder gasoline marine engine was shipped for years in the bulky wood crate shown above, which added 125 pounds to the shipping weight. But when Inland engineers were put on the job, they found the way to ship these same engines *more safely*, in corrugated containers weighing only 25 pounds, complete with bottom pallet.

But shipping costs weren't the only savings accomplished. The costs for packaging materials and labor were reduced more than 50% per unit! In addition, the Inland corrugated containers have sufficient compression strength to permit 2-high shipping and warehousing, and are designed to provide complete protection for the engines, even if they should be turned upside down.

Your Inland package engineer is a *corrugated shipping container specialist*. When your product packaging is entrusted to him, you can be sure you are getting the benefit of every possible packaging economy applicable to your product.

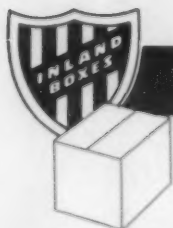
*Name on request.

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Send for this booklet fully illustrating Inland's services, facilities and products.



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INLAND CONTAINER CORPORATION

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NEW SALES SERVICE LABORATORY

Phillips experienced technical service staff will assist you in working out new products and processes utilizing Marlex. Make arrangements with your local Marlex sales representative.



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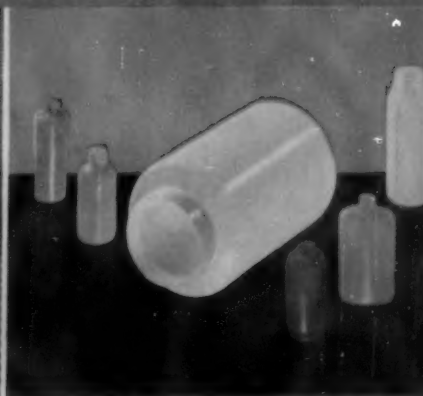
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MARLEX 50 for injection molding—Rich colors, glossy surfaces, fine details! Marlex 50 moldings withstand up to 250°F without losing shape . . . endure temperatures far below zero without losing toughness and pliability. Ideal for accurate vacuum moldings.



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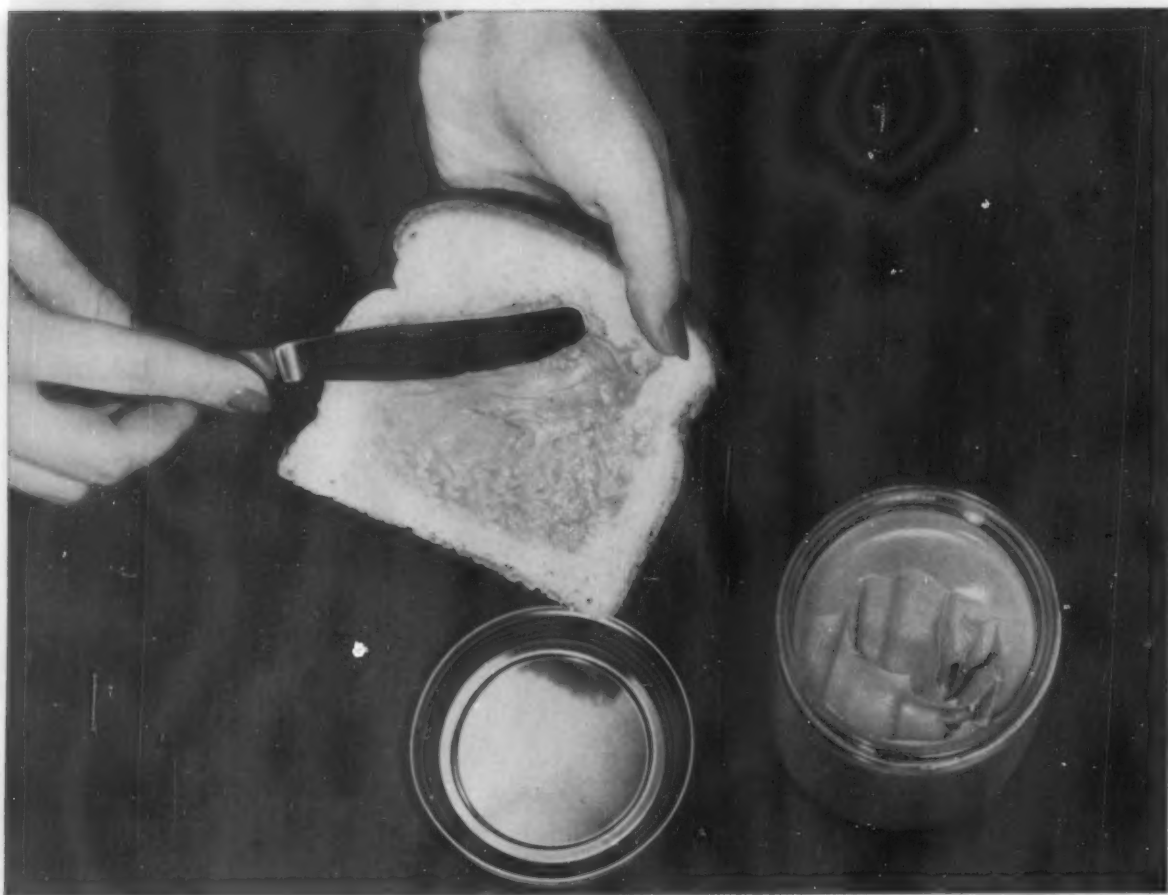
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Hycar helps Crown retain peanut butter freshness

PEANUT BUTTER is an eating treat, but a packaging problem. Its oils destroy the jar cap liners that are ordinarily used to seal in tasty food freshness.

By making cap liners of Hycar nitrile rubber, Crown Cork & Seal Company, Inc., of Baltimore, Maryland, has solved this problem with peanut butter and other oil-containing food products. Ring liners made of Hycar are also used for mayonnaise, maraschino cherries and other

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Crown's Hycar cap liners are tough and smooth—seal tight yet make jar opening easier. They resist food acids and oils, are odor-free and extend the shelf life of foods.

Hycar can probably help solve your packaging problem. For more information, write Dept. DQ-3, B.F. Goodrich Chemical Company,

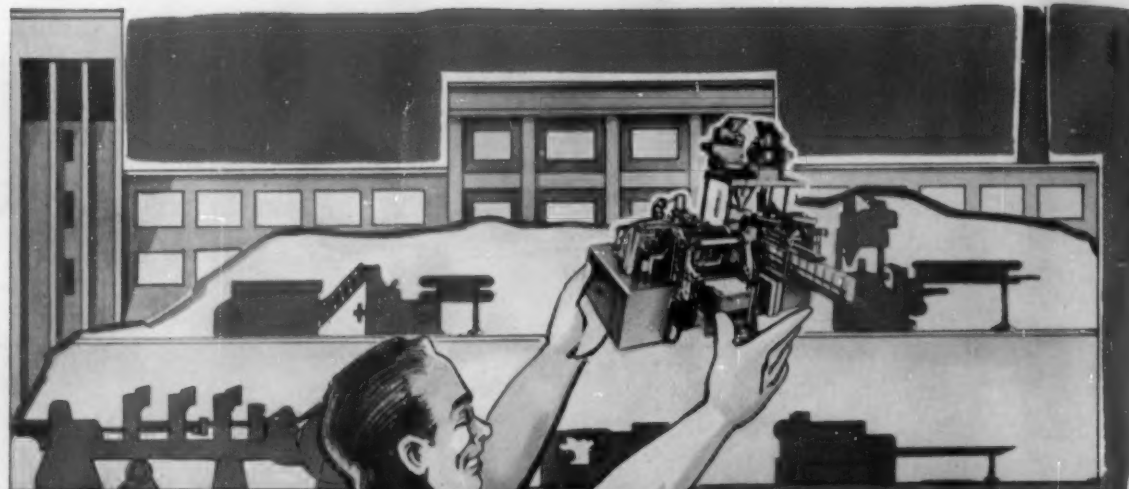
3135 Euclid Avenue, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.

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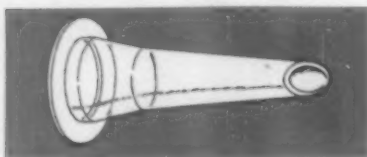
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CAULKING COMPOUND TUBES MADE BETTER BY CLEVELAND CONTAINER



NEW SPOUT

Will not dislodge due to improved lock-in feature on tin plate top.

Sturdier with wider, thicker base . . . strong shoulder for greater pressure . . . added length for hard-to-reach spots and to ensure uniform bead during "stop and go."

Tip of spout has improved angle so outlines are easily followed . . . flexible enough to obtain desired bead width . . . can be bent to seal partially used cartridge.

This improved cartridge offers many advantages! Made of spirally wound high test paper, it has exceptional rigidity and strength, yet it is flexible enough to withstand rough handling without denting or damage. A greaseproof liner prevents leakage.

The metal plunger (shipped separately) serves as a positive seal and is designed to reduce the "overflow" of the compound to a minimum. The plunger can be embossed for color or content identification. The nozzle seal can be broken with gun pressure, if desired, without distorting the cartridge.

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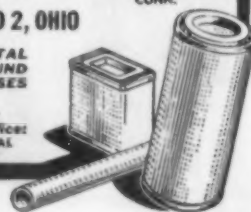
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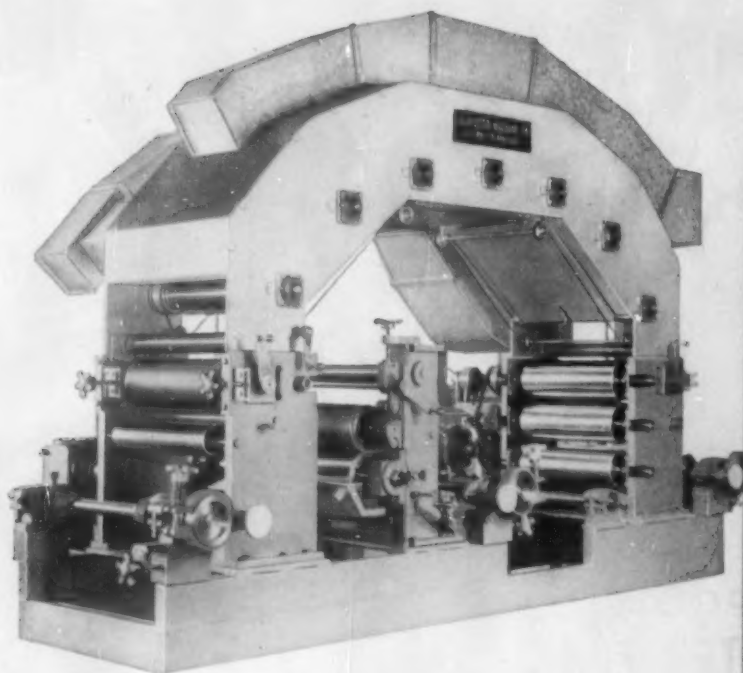
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It is used, and was primarily designed, for laboratory use in processing aluminum foil, transparent films, paper and board. It is also an ideal machine for reflecting the results to be obtained from regular production machines.

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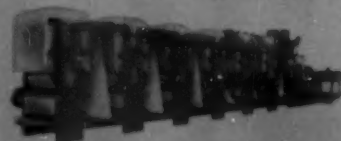
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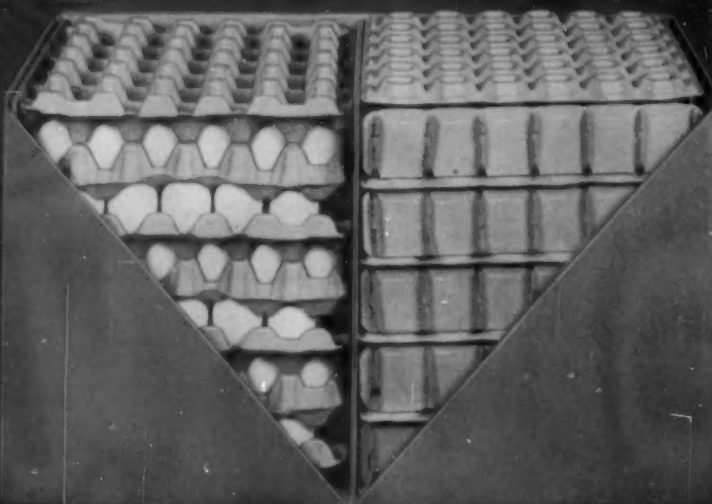
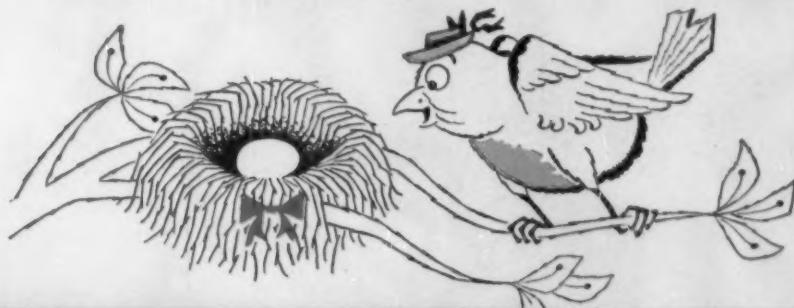
We have always refused to package any product that we did not think could be properly distributed in our packages. We have always made available packaging materials to our customers so that they could select the material best suited to their product. We have consistently adhered to the policy that every Ivers-Lee Unit-Package must be the finest that can be produced.

Here you have one more reason why Ivers-Lee numbers among its customers the world's leading ethical manufacturers.



Ivers-Lee is the creator and Contract Packager of Super-Sealtite, the Catchcover, the Tab Pak and a thousand and one other unusual packages for sampling and distributing single or multiple doses of tablets, capsules, powders, creams and liquid Droptettes.

Man-Made NESTS



custom-fitted
protection
guards a
fragile
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Be Wise-Buy



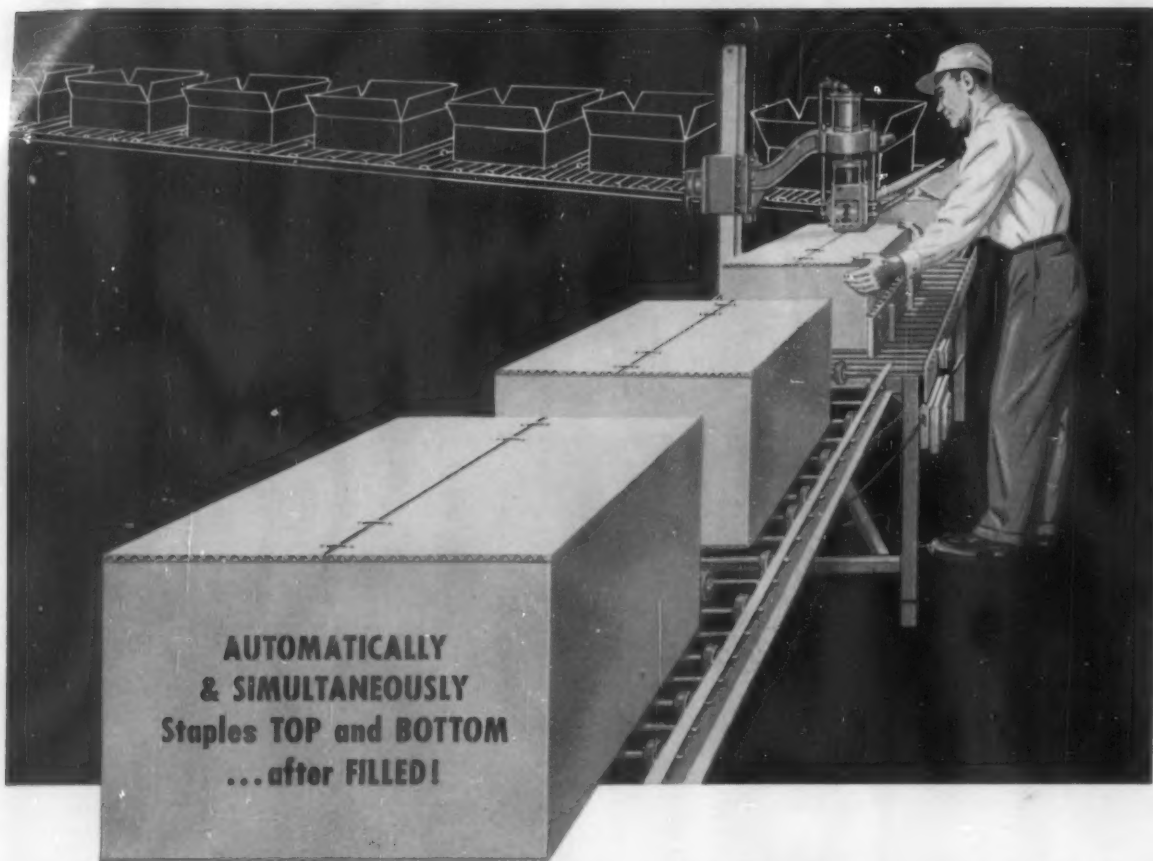
A wide variety of fragile products—foods, glassware, electrical parts and many others—are now packed more efficiently with Keyes molded pulp shapes. In addition to eliminating losses from damage in transit, packers usually find that molded pulp actually costs less than ordinary packing materials and saves valuable storage and shipping space. Take advantage of these savings. Years of experience in the field of molded pulp, coupled with modern plants and manufacturing skills, are available at Keyes to design and produce better packaging for you.

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an open and closed "case" by International

MERCHANDISE is waiting... The call goes out for more cartons! No time for glue to dry! No space for bulky "set-ups"!

No problem, either—because an International DUAL STAPLER is on the packaging line.

Flat cartons are pulled from stock, opened, filled with merchandise—and sent to the waiting DUAL.

Click! Click! Simultaneously and automatically, both the top and the bottom flaps of the carton are securely stapled *from the outside!*

The goods inside are perfectly safe. China or steel, the contents are protected by the DUAL's easily adjusted penetration control. It allows full, "blind", or anything-in-between clinching.

Just one man on the line handles up to a *thousand* cartons an hour just like this one—with automatic ease!

Is this a description of *your* packaging department? If not, it can be! Let your International Representative show you **HOW**.

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ORIGINATORS OF CARTON CLOSING STAPLERS

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Medicine Men and Men of Medicine

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Petticoats remain clean, bright and attractive during shipping, handling and selling when packaged in strong attractive film of ALATHON. Readily adaptable to all kinds of soft-food products, transparent film of ALATHON provides clear visibility... added sales stimulus. ALATHON 10 and 34 are tailored to have optimum properties for this type of packaging application. (Film of ALATHON extruded by Plastic Horizons, Inc., Paterson, New Jersey; packaged by Tracy Packaging, Inc., Brooklyn, New York, for Melodee Lane Lingerie, Inc., New York, New York.)



Frozen right in the package by Redi Foods Co., Bronx, N. Y., these clams on the half shell are sea-fresh and ready to eat when removed from tough, transparent film of ALATHON. Since ALATHON prevents freezer burn and does not become brittle or deteriorate at extremely low temperatures, it is ideal for packaging many types of frozen foods. ALATHON 14 is designed to have properties best suited for frozen-food packaging. (Film of ALATHON converted by Fine Cellophane Bag & Tube Co., Bronx, New York.)



Washers and a wide variety of sharp, heavy hardware items are easily and economically handled in packaging materials coated or laminated with ALATHON and Du Pont MYLAR® polyester film. Packages such as this reduce bulk shipping costs, since a lighter master container is practical. And package selling reduces loss from spillage and rust. Machine packing permits accurate count control. ALATHON 16 has properties particularly desirable for coating applications. (Packaging material fabricated by Dobeckmun Company, Cleveland, Ohio. Packaging machine by Stokes & Smith Co., Philadelphia, Pa., for Philadelphia Steel & Wire Co., Philadelphia, Pennsylvania.)

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POLYETHYLENE RESIN

for your packaging needs



Strong, lightweight and flexible, ALATHON provides superior "squeeze-to-use" packages for a wide range of powder, liquid and cream products. Squeeze containers made of ALATHON are tough... snap back quickly between squeezes. They are chemically resistant, odorless, tasteless and non-toxic. Since containers made of ALATHON have low permeability, ingredients are kept intact for long periods. ALATHON 20 and 22 are designed to have properties applicable for "squeeze-to-use" packages. (Containers of ALATHON manufactured by Bradley Container Corp., Maynard, Massachusetts.)



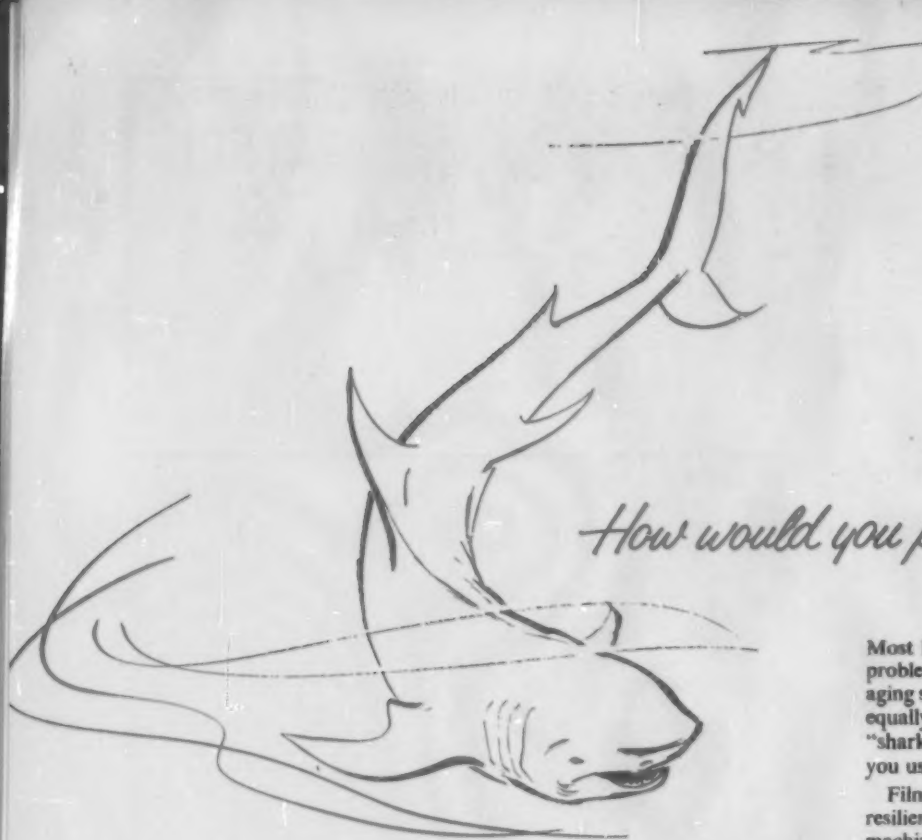
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Polychemicals Department

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OVER



How would you package a shark?

Most likely you will never be faced with the problem of packaging a live shark. But packaging situations will probably arise which seem equally difficult. And whatever your particular "shark," you'll find it easier to package when you use film of ALATHON polyethylene resin.

Film of ALATHON is heat-sealable, tough and resilient. It is excellent for packaging sharp machine tool parts, screws and other hard-to-handle hardware. Even if the film is punctured, the great notch resistance of ALATHON will retard further tearing.

The remarkable impermeability of ALATHON to grease, oil and moisture is another important factor. Although film of ALATHON can be as thin as one mil (.001"), it will protect against the migration of most food fats. ALATHON imparts no odors or taste to its contents and retains its flexibility at temperatures as low as -100° F. Thus, ALATHON is ideal for packaging frozen shrimp, sherbet (or shark).

Another consideration is the display value and sales appeal of transparent film of ALATHON. Whether the buyer is looking for shark fins or shirt fronts, the chances are he'll be sold faster if he can see your product through smart-looking packaging of ALATHON.

So the next time you are confronted with a packaging problem, whether it be tools or toys, foods or fodder, acids or alkalies, lingerie or loganberries—or sharks, remember film of Du Pont ALATHON.



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RONDO . . . is the modern method of protective packaging for small and delicate objects

The standard feature is the spring-clip action of its partitioning flutes which hold each inserted item safe and snug.

RONDO has become increasingly recognized all over the world by manufacturers who are looking for an economical way to protect their products in assembling, handling, and shipping. RONDO is offering assistance to many different industries. Typical items packed by RONDO are: Medical ampuls, electronic tubes and components, tubes for ointments and artists' colors, crayons, pastels, tablets, wafers, and many others.

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THE GARDNER BOARD AND CARTON CO.

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Manufacturers of Folding Cartons and Boxboards

Paper Needs
the
"TOUCH OF TALENT"



Early German papers were hand made by depositing rag fibers evenly on wire mesh, a process requiring considerable skill.

But it took the talent of Albrecht Dürer to convert mere paper into masterpieces such as this priceless 16th century woodcut of "Samson."



COURTESY, MUSEUM OF FINE ARTS, BOSTON

The effectiveness of a paper product depends upon the talent that produces it whether for display on a museum wall or on a super market shelf.

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MODERN PACKAGING

June 1967

Vol. 30, No. 10

The urge to simplify

Demand for elimination of time- and money-wasting variations is bearing fruit in voluntary supplier-user programs such as that of the food industry. Here's how it works

Hundreds of products aimed for mass, self-selection markets may be put into simplified, standardized, more economical and better working packages as a result of studies and recommendations by the Inter-Industry Food Packaging Committee.

Packagers have become aware of a buzz of activity surrounding this committee's activities in Chicago, where it was organized just a year ago.

What is it all about? What has it accomplished and where does it expect to go?

Though ostensibly concerned only with food packages, the committee's program is likely to have far-reaching implications. One reason for this is that the voluntary group is merchandising minded and works closely with representatives of package manufacturers, food wholesalers and retailers—all of whom keep a close eye on costs, sales and a thinning profit margin.

Managers in non-food operations are going to ask

Bewildering array of different-sized bakery packages has caused multiple problems in food stores. A great deal of order has been brought out of chaos by reducing styles and sizes in some bakery classifications from 732 to 32. With store shelf space at a premium, retailers are eager for packages that stack neatly and orderly.



packagers of their lines to follow suit if some contemplated food-package improvements work out as expected. Such a large non-food retailer as Sears, Roebuck & Co. is closely studying the committee's activities and reports.

The food industry packaging group is not unique. There have been other instances in which package users and suppliers have joined forces for standardization—and, with the present emphasis everywhere on simplification as a cost cutter—there will be more. But few such groups have had the organization, the scope and the continuing program that mark this food-industry effort. It may well prove to be a model for other packaging industries.

The Inter-Industry Food Packaging Committee itself is an outgrowth and continuation on a much broader scale of the Inter-Industry Bakery Packaging Committee. This committee was instrumental in reducing sizes and styles of hamburger-bun and weiner-roll cartons from a bewildering 732 to 32. A simplification campaign was launched in early 1955 when the Commodity Standards Div. of the Department of Commerce, in cooperation with the National Bureau of Standards, published the standardization recommendations of the bakery committee.

Does "standardization" or "simplification" imply

loss of company and product identity? Testimony shows that this is not the case; sales increases, lower costs and faster product turnover have resulted from uniformity in dimensions, which works to the advantage of the distributor and retailer as well as the packager.

The food packaging committee does not contemplate any proposals that would regiment design among the thousands of highly competitive food packages.

It is concerned, however, with package markings, shapes and sizes which in any way hamper sales or incur needless expense. These are objectives anyone can applaud.

The Inter-Industry Food Packaging Committee was organized in May, 1956, because of problems being created by today's mass marketing. The committee's make-up covers a broad range of food-industry and packaging interests, including retailers, wholesalers, manufacturers, processors, package manufacturers, Government, education and publications.

The committee's chairman is Merrill Maughan, executive secretary of the Inter-Industry Bakery Packaging Committee.

Success of the bakery group in cutting down the variety of one group of bakery packages illustrates



PHOTO COURTESY NATIONAL-AMERICAN WHOLESALE GROCERS' ASSN.

What's my line? seems to be the question asked by these poorly marked shippers. Inter-Industry Food Packaging Committee asks for legible markings on all four sides to indicate exactly what contents are. These mysterious master cartons contain 12-oz. tumblers of something. Wholesaler and retailer warehousing costs mount for such poorly marked goods, as clerks waste time to determine company and brand name, quality, product, code numbers, etc.



Where's the price?

Lack of uniformity on price location of food packages in supermarkets loses sales and wastes the time of check-out girl.



Easy-to-find price markings are shown on these packages. Jewel Maid Dip Chips are pre-priced with large, pressure-sensitive label at packager's plant to meet current price needs. Campbell's soup can and Appian Way foil package are priced on top. White spot on foil makes price easy to read. Flexible packages are more difficult to mark, but price of M & M candies is easy to read at upper right.



Difficult to find are price marks on any side of food packages. Flavor Kist cookie carton has price spot on top, but box was marked on bottom. Uniform placement of packages in master cartons by the manufacturer may help solve retailer problem of rapid price marking after shipping container is opened. Price mark on end of can of sardines is barely legible against dark copy panel.



Bad and good price marking on bottle caps is demonstrated by printed and unprinted bottle caps. Many retailers feel that elaborate copy and color on bottle caps does little to sell or identify product. Some feel that customer would be served better with caps that are light in color and bear a minimum amount of copy and artwork.





Committee chairmen confer prior to meeting. Left to right; Merrill Maughan, Inter-Industry Bakery Package Committee, chairman of the Inter-Industry Food Packaging Committee; Ralph Johnson, National-American Wholesale Grocers' Assn., Inc., chairman of committee on shippers; Mrs. Marie Kiefer, National Assn. of Retail Grocers, chairman of committee on price-spot location; Henry King, Super Market Institute, chairman of committee on retail packages; Dr. Harry Trelogan, director of market research for the U. S. Department of Agriculture.

some of the ways the present committee operates: work with existing organizations concerned with the packages in question, eliminate needless containers, yet leave an adequate array of packages from which to choose and meet any packaging requirements.

The committee currently is working on three specific projects. It has organized a speaker's bureau to discuss food packaging problems, under the direction of Andrew Duncan, president of the Cereal Institute. The investigations are:

1. Simplification and standardization of master shipping cartons.
2. Uniform location of a light spot for price marking.
3. Simplification and standardization of retail packages.

Master carton simplification

Already unanimously adopted by the committee are proposals for simplifying and standardizing shipping containers. These are endorsements of case-marking and case-shape recommendations that have been set forth in a joint report by the National-American Wholesale Grocers' Assn., Inc., and the Grocery Mfrs. of America, Inc.

The complete report is available from NAWGA, GMA or the Inter-Industry Food Packaging Committee. Among the primary considerations it sets

forth for shippers are legible, informative and four-sided markings combined with carton sizes and shapes that can be easily palletized under warehousing conditions.

Some prime offenders are master cartons that splash the company name, but give no indication of the contents and square shippers that prevent interlocking of boxes on pallets.

Obviously, the desired requirements of many large retailers and wholesalers could swing a considerable amount of weight with food packagers. No distributor or seller has delivered an ultimatum to packagers that shipping cases must conform to certain specifications. However, such influential organizations as Certified Grocers of California have conferred with food packagers and outlined the problems which can be created by poor shippers. Considerable cooperation has resulted from such discussions and most companies have accepted the suggestions. One prominent food manufacturer has changed 95% of its shipping containers and is ordering new ones to meet the Inter-Industry Food Packaging Committee recommendations.

The group's committee on this project is headed by Ralph Johnson, executive vice president of the National-American Wholesale Grocers' Assn., Inc.

Uniform price spot

Several recommendations on the uniform location of the light-colored spot for price marking have been adopted. A committee studying the problem is under the chairmanship of Mrs. Marie Kiefer, secretary-manager of the National Assn. of Retail Grocers.

The need for a standardized price spot is evidenced by three observations:

1. A large percentage of housewives are confused, since they don't know where to find the price spot on food packages.
2. Sales are reduced because of this confusion.
3. It causes check-out girls to lose time and store owners are seeking every way to break the cost-consuming bottleneck at the cash register.

Six points were adopted at an Inter-Industry Food Packaging Committee meeting last fall:

1. To determine a uniform price-spot location.
2. To make the spot large enough to contain unit and multiple price markings.
3. To develop suitable ink for good price marking.
4. To use a spot light in color, though not necessarily white.
5. To keep printing on bottle caps to a minimum and make caps light enough and large enough for multiple price markings.
6. To test the marker and price spot at retail.

Following this meeting a study was made by



Standardization does not mean identical-looking rival packages. These cartons, all of which follow the committee's recommended specifications, show that variety in package design is still at the option of the packager in a highly competitive situation.

NARGUS with the help of Booz, Allen & Hamilton Associates to find an answer to the first point, the location for the price spot.

This study is being reported at a meeting this month in Chicago, with a recommendation to be acted upon by the committee. Indications are that the committee may decide to agree upon a general proposal which can be interpreted to fit specific packages, namely, that all food packages should place the price spot at the upper right-hand corner on the top of the package, with some specific exceptions.

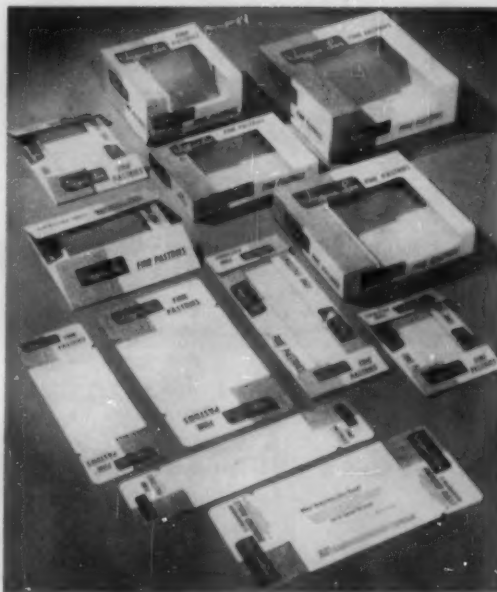
For most cans, bottles and folding cartons this would not present serious problems, though redesign will be necessary for some caps or boxes to comply with the proposal. Flexible packages and unusually shaped containers may prove to be more difficult to handle.

It is also important that packages be placed in shipping containers for easy price marking when shippers are opened in the store. This may require modification for some master cartons to facilitate easier and rapid price marking.

Retail packages

Not so much work has been completed in this exceedingly complex problem of simplification and standardization of retail packages. However, the committee feels the problem is not so insurmountable as it first appears.

The tremendous reduction of packages for hamburger buns and weiner rolls has been cited. The



Family design is a recommendation of the Inter-Industry Food Packaging Committee, aimed at simplifying packages and bringing better brand or company identity to the packager.

Paraffined Carton Council's recent move to standardize the 1-lb. Eastern flat margarine carton has been accepted by more than 70 margarine and carton manufacturers, and the Elgin style soon will receive similar treatment.

The retail package com- [Continued on page 226]



Basic concept is the use of a white background with red and blue type treatment. White was selected to convey a professional feeling; red and blue for maximum visibility without blatancy. Swiss Grotesque type face for logo was felt to provide strong identity and works well in narrow architectural structure of package. Ciba name is usually vertical in reverse red panel and does not interfere with product identity.



When ethical goes popular

Ciba's new packages for non-prescription drugs illustrate the new design approaches that must be taken when the ethical drug firm begins to compete over the counter

Evidence of a trend among prescription drug firms to compete more actively in over-the-counter sales may be found in the strikingly bolder techniques in package design being adopted today by some of the more conservative houses for their non-prescription items.

A particularly interesting example is the new approach in this direction taken by Ciba Pharmaceuti-

cal Products, Inc., Summit, N. J. The thinking behind Ciba's design change is worth examination.

For more than 70 years Ciba has dealt in ethical drugs (those promoted exclusively to the allied professions), although many of these could be sold without prescription. Recently the company decided to promote certain of its products more effectively in the non-prescription field, although the

same products will be continued as well in the company's line of ethical products. The program also included the planning of new packaging for the new non-prescription product, Antivy, a lotion for the treatment of ivy poison.

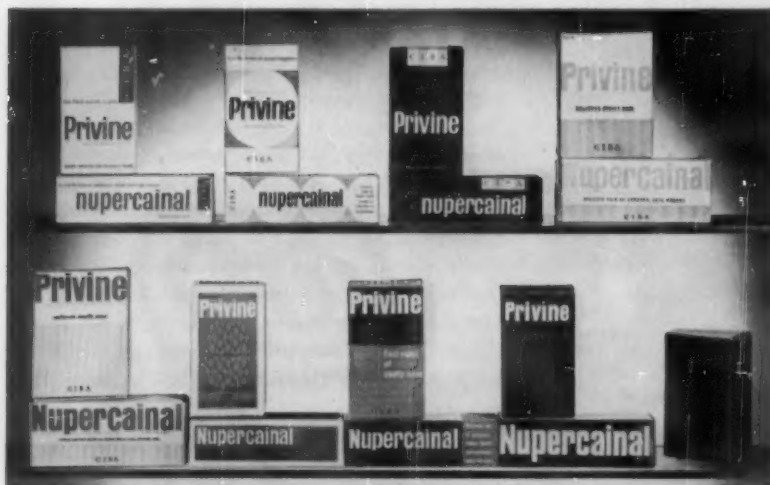
The project called for (1) more imaginative, stepped-up package design to meet the requirements of point-of-purchase appeal in competition with established non-prescription drug products and (2) strong visual elements to establish the corporate personality of Ciba in the minds of consumers as a dignified, mature, responsible organization.

The program was regarded as such an essential matter in company policy that a special committee, headed by Ciba's president, T. F. Davies Haines, was formed in February, 1956, to administer it. The committee included the chiefs of sales, market research, graphics, methods and package development, advertising and sales promotion. It instructed the graphics section to prepare various approaches to the problem for study by the committee.

Graphics' first step was to prepare a number of designs, embodying various avenues of approach in color, layout and typography for each of the products: Antivy (lotion), Privine (solution and nebu-



For visual presentation, new Ciba packages were placed amidst competitive products to determine the effectiveness of the new design.



Some of suggested ideas from which the company committee narrowed its final selection. Although many optical devices were considered by the company, the final decision was for a bold, simple design treatment.

Color alternates of the final design were also considered, with the ultimate decision being in favor of the white background.





Transparent acetate sleeve was selected for tray boxes for Pyribenzamine and Privine nebulizers so that purchaser can see shape of nebulizer, convenient to carry in pocket or purse.



Opaque oval squeeze bottle for Antivy was selected for esthetic appeal and ease of handling. Paperboard counter display features cartoon drawing of a poison-ivy sufferer, quickly conveying the idea of product use.



Thermoformed polystyrene tray and slide for unit-packed rectal suppositories shows how adaptable the basic design is to all types of packaging for Ciba products.

lizer), Nupercainal (ointment, cream and suppository) and Pyribenzamine (nebulizer).

For presentation to the committee, a model pharmacy shelf was prepared. This shelf made it possible to show each design as it would appear in the midst of competitive products. Basic objectives were to:

- ▶ Provide unmistakable identity of each package as part of the Ciba line.
- ▶ Denote a feeling of prestige and dependability.
- ▶ Convey a feeling of restraint and dignity.
- ▶ Express cleanliness.
- ▶ Obtain sufficient point-of-purchase impact to overcome competition of surrounding packages.
- ▶ Create esthetically pleasing packages in the customer's hand and in the home.
- ▶ Provide type and lettering that is easy to read.

The designs submitted embodied different package sizes, suggested colors, type faces and graphic forms. Even the possibility of fluorescent colors was tested to ascertain how far the designers could go color-wise to achieve high visibility.

The committee first narrowed the multiplicity of designs to eight basic ideas, which are illustrated in an accompanying photo. Successive committee meetings narrowed the choice first to three, then to one basic design.

This choice consists of a white background with red and blue type treatment. White was selected to convey a professional feeling, and red and blue because they appeared to have maximum visibility without the feeling of blatancy. The product logo is Swiss Grotesque, a type face developed primarily as a poster face that gives strong product identification and works well in the narrow architectural structure of a package. Company identification generally is a reverse logo in a red panel placed vertically instead of horizontally so that it does not interfere with product identification and has a definite character of its own.

The development of the new packages involved a number of steps. The [Continued on page 221]

Credits: Privine—Bottle by Owens-Illinois Glass Co., Toledo 1, Ohio. Carton by The Wilkata Folding Box Co., 300 Hoyt St., Kearny, N. J. Pyribenzamine Nebulizer by Imco Container Corp., 75 & Cleveland Sts., Kansas City 30, Mo. Carton and acetate sleeve by Newark Paper Box Co., 216-228 High St., Newark 2, N. J. Nupercainal—Ointment and cream tubes by Peerless Tube Co., 58 Locust Ave., Bloomfield, N. J. Carton by Wilkata Folding Box Co. Thermoformed package for suppositories by Plastic Artisans, Inc., Dock St. & Martin Pl., Port Chester, N. Y., using Dow Chemical Co.'s polystyrene. Antivy—Squeeze bottle by Imco Container Corp. Urea closure by Armstrong Cork Co., Lancaster, Pa. Display carton by Sample-Durick Co., Inc., P. O. Box 207, Chicopee, Mass.

Contoured rifle sight

Upgraded set-up box with thermoformed transparent blister gets expensive rifle sights off the shelf onto counter to stimulate planned, impulse and gift purchases

A display package of deliberately expensive construction to emphasize the quality of the precision-made Bear Cub telescopic rifle sight and to protect it in handling has won self-sell counter and window space for these products of Kollmorgen Optical Corp., Northampton, Mass.

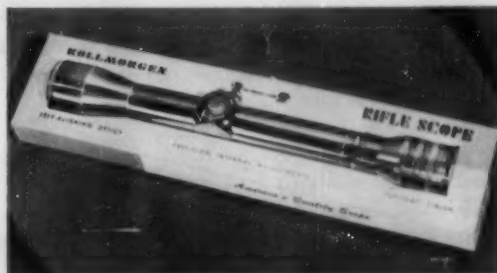
Traditionally, rifle scopes have been packaged in low-cost paperboard containers that provide little protection and usually wind up stacked behind the counter on dealers' shelves. To meet the trend toward open display and self sell in retail stores, Kollmorgen decided to put its telescopic rifle sights in a package that would show them off to advantage, provide product identification in counter displays, protect the scopes in shipping and handling, and catch the eyes of gift purchasers.

The long, black telescopic instrument stands out in a contoured transparent blister, vacuum formed of acetate, which completely frames the scope in the die-cut cover of a long, narrow set-up box. Blocks of rich, dark red printed on the high-gloss white box covering combine with horizontal layout of copy printed in strong black type to create a luxury effect and to emphasize length.

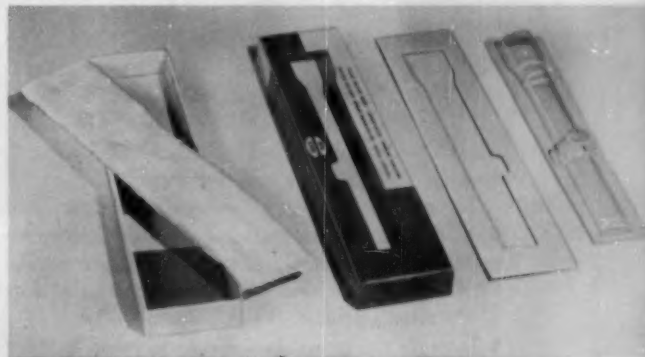
To protect the instrument against soil and damage in handling, the contoured display blister is held in position by a die-cut insert cemented to sandwich the blister flange between it and the box cover. Two corrugated squares and a strip of white cellulose wadding in the box base cushion the rifle sight and

support it in the blister. Boxes are made in four sizes for scopes of different [Continued on page 231]

Credits: Package design by Frank Condon Associates, Inc., Northport, N. Y. Vacuum-formed blisters by The Box Shop, Inc., 373 Lexington Ave., New Haven, Conn., and Prolon Plastics Div. of Pro-Phy-Lac-Tic Brush Co., Pine St., Florence, Mass. Set-up display box by The Box Shop. Corrugated shipping container by A & P Corrugated Box Co., Lowell, Mass.

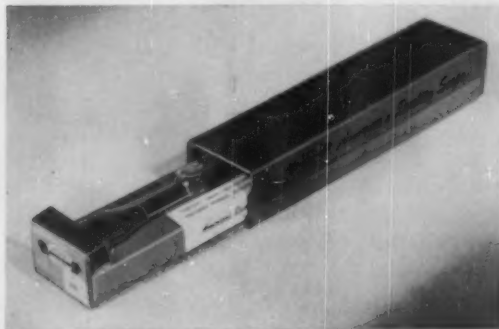


Quality appeal of precision optical instrument for consumer use was objective of new visibility package, with thermoformed acetate blister, contoured to the sight, projecting through lid.



Make-up of the box. Die-cut cover holds vacuum-formed acetate contoured to shape of telescopic rifle sight. Flat die-cut insert cemented inside box cover sandwiches flange to anchor the acetate blister. Two corrugated squares and cellulose wadding cushioning in box base support the scope.

For shipping, box is held immobile with air cushion around blister in corrugated sleeve and slide with folded ends that brace display container.





Colorful package speeds sales, prevents damage from handling. Convenient square unit assures customer of not less than four quality bananas of guaranteed weight. Back of package tells why packaged bananas are better, while side panel describes the degrees of ripeness when bananas are best for specific uses.



No waiting to buy when pre-priced packages are mass displayed, ready for shopper to pick up. Retailer is saved all of the costly labor and time of preparing loose bananas for sale.

Bananas, although they are one of the most widely distributed of all produce items, have long resisted the trend to pre-packaging. Because of their variations in size and because they are customarily priced by weight and purchased by number, the problem of getting an acceptable standard package for bananas seemed to most merchandisers insurmountable, even though the opportunity for brand-name promotion made the idea highly attractive.

The difficulties have now been overcome and the advantages realized by the Long Island Banana Co., Richmond Hill, N. Y., with a method of packaging that is winning favor with supermarket operators in the New York metropolitan area, giving consumers a new standard of quality in bananas and building business for the Long Island company.

The new package consists of a square paperboard tray automatically overwrapped with four-color-printed cellophane. By eliminating the numerous handlings that cause bruising and subsequent loss to the retail operator, it has been found to:

- ▶ Increase the retail shelf life of bananas to more than a week in contrast to the usual three days for loose bananas.
- ▶ Offer a packaged unit which can be maintained at a standard retail price during 70% of the year.
- ▶ Save the retailer between 4 and 5% of the cost

per 40-lb. box by eliminating the usual 2 lbs. of waste resulting from shopper handling of unpackaged bananas.

▶ Speed sales because of the attractiveness of the packages on display and the ease with which the shopper may pick them up without waiting for weighing or wrapping.

▶ Permit merchandising by a brand name, "Flav-O-Ripe," which consumers are quickly recognizing as a symbol of quality.

The advantages to the retailer are more apparent when it is understood that the average retailer spread between purchase and selling price of bananas is only about three cents per pound. Out of this three cents, the retailer must absorb the loss of fruit damaged by store handling, pay for costly labor to unload boxes of loose fruit, tape it into selling units as is the customary practice in many supermarkets, weigh the unit and price it for the counter. On an average of 50 to 70 boxes per week this amounts to a substantial overhead. Packaged units of quality fruits, even at a price to absorb the packaging costs, cut down this high overhead.

Long Island Banana Co. began looking into the possibilities of consumer-unit packages as a means of increasing sales to supermarket accounts last year. The first packages were introduced in October,

Boxed bananas

Long Island distributor solves the pre-packaging problem with a four-color film-wrapped tray packed by a method that provides standard weight and price

1956. The reception in leading Long Island supers, including King Kullen, Bohack, First National and Grand Union, the company reports, so far has more than rewarded the firm for the effort and investment put into its new packaging operation.

And the company's experience in selecting the right package, it is believed, offers an interesting example of problems that must be solved in connection with the many perishable products which are beginning to demand consumer packaging to hold their place in today's food merchandising.

The Long Island firm's first task was to determine that a package containing four or five bananas was the preferred unit of sale. However, since bananas do not grow uniform in size, it was necessary to establish a weight standard averaging about 1¾ lbs. per package with a guarantee: "Contents not less than four bananas."

A tray, 8 in. square by 1½ in. deep, was selected as the most efficient size and shape to hold the bananas and show them to best advantage through the cellophane overwrap. Three-quarter-inch flaps extending over the top on two sides provide greater strength and facilitate the wrapping operation.



After proper ripening, stems of bananas for packaging are carefully selected for size. On the packaging line, the stems and fingers are cut so that each individual banana may be [Continued on page 216]

Credits: Cellophane wrap by Milprint, Inc., 4200 N. Holton St., Milwaukee, Wis. Folding trays by Coates Board & Carton Co., Inc., 70 Outwater Lane, Garfield, N. J. Wrapping machine by Package Machinery Co., East Longmeadow, Mass.



Packaging procedure begins with cutting and grading of bananas ready for placing in trays. Formed empty trays pass workers on upper conveyor. Filled trays move on lower conveyor to wrapping machine.

Finished packages, wrapped in printed cellophane, emerge from wrapping machine ready for packing and delivery. Package increases retail shelf life from three days to more than a week.

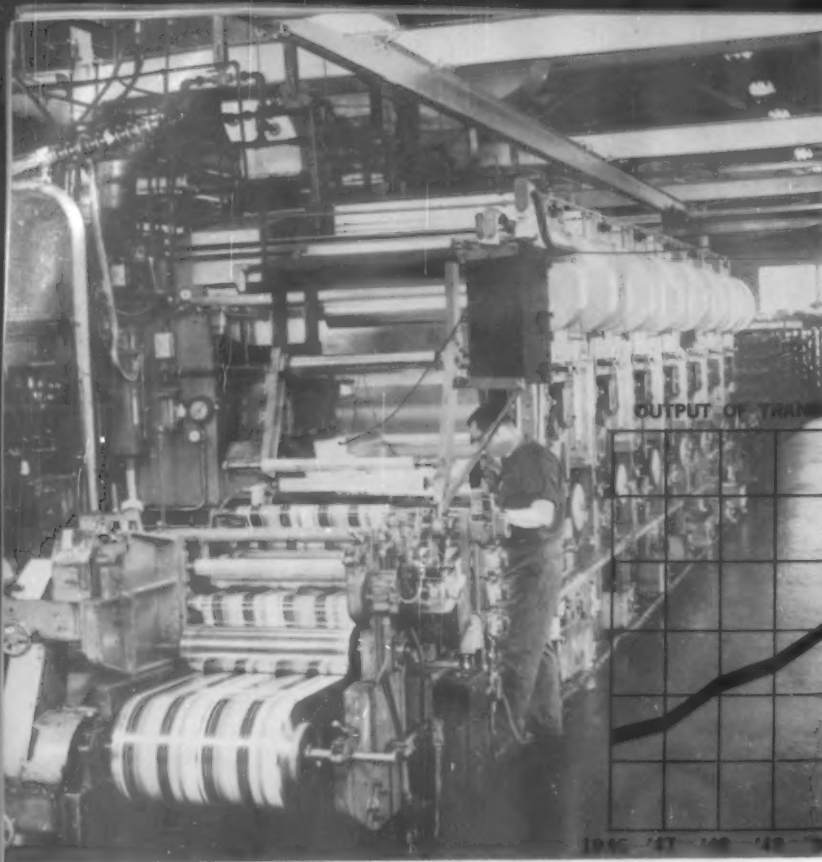
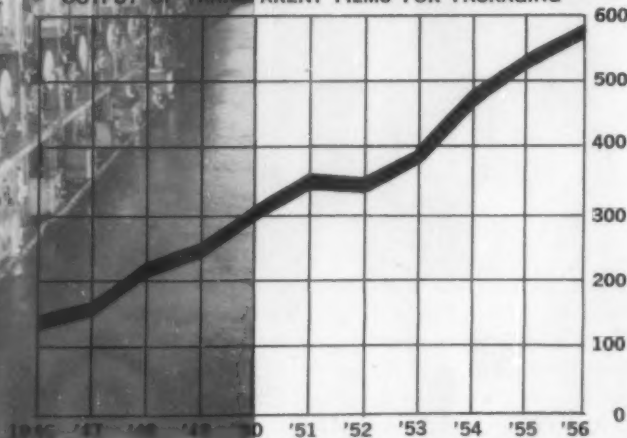


PHOTO COURTESY SHELLMAR-BETNER DIV., CONTINENTAL CAN

Converting operations—printing, coating, bag making—are applied to about half the transparent film used in packaging; the rest goes to packagers in plain roll form. Photo shows high-speed printing of cellophane in a converter's plant on seven-color rotogravure press (by Champlain). Graph shows how production of transparent films for packaging has jumped from 127 million to 583 million pounds within a period of only 10 years.

MILLIONS
OF LBS.

OUTPUT OF TRANSPARENT FILMS FOR PACKAGING



SOURCE: U. S. DEPT. OF COMMERCE

5



SURVEY OF A SUPPLYING INDUSTRY

Film

The dynamic film-package industry is the fastest-growing of the big package-supplying industries today. From cellophane's modest U. S. birth at Buffalo, N. Y., in 1924 until World War II, transparent film packages have had a steady and sometimes spectacular growth. Since 1946, when polyethylene and other new films began to appear, developments have come in rapid-fire order. Sales and production have mushroomed. And the ceiling is nowhere in sight.

The Department of Commerce estimates that in 1956 the film-manufacturing industry turned out for packaging purposes 583 million pounds of transparent films worth \$379 million. Volumewise, this was an 11% increase over the preceding year and capped a booming 459% growth since 1946.

The total cost of film packaging would also have to take into account the value added by converting

—printing, bag making, etc. Approximately 35% of cellophane, 75% of polyethylene film and 50% of all other plastic films go through the hands of converters—the remainder going to packagers as plain film direct from the manufacturers. The over-all dollar volume of the converting industry (including some non-packaging and non-film products) is estimated for 1956 at \$386 million—up \$30 million over 1955.

The National Flexible Packaging Assn., representing the film-converting industry, suggests that converted film may be today's best packaging buy—its price level moving steadily downward in the last four years while almost everything else was heading up.

According to NFPA, in a study based on wholesale price indexes of the Bureau of Labor Statistics, cost changes between 1952 and 1956 show; metal

containers, up 16%; glass containers, up 20.3%; boxes and shipping containers, up 9.8%; paper bags and shipping sacks, up 10.8%. In contrast, during the same period, according to converters' own reports, printed cellophane rolls went down 6.5%; cellophane bags dropped 13% and polyethylene bags plummeted 42%.

The lower prices have, of course, been made possible by rapidly rising volume.

Pacing the onrush of film packages are the big two: cellophane and polyethylene.

Before World War II *cellophane* accounted for 80 to 90% of all of the transparent-film packages. It is still the dominant material, as reflected by the over-all capacity by the end of 1957 of an estimated 475 million pounds by the nation's three cellophane producers. Together, the three producers will have expanded their capacity 42% in one year.

Military packaging in World War II brought great strides in the protective aspects of flexible packaging. The most important new recruit that was discharged from war priorities was *polyethylene*, a strong film that is almost completely chemically inert, odorless and tasteless, with good water-vapor resistance, especially at low temperatures. This material has passed all other plastic films so that today it stands second only to cellophane. An estimated 53 polyethylene extruders turned out 150 million pounds of film and sheet¹ in 1956.

Other films that have earned important positions in packaging include *cellulose acetate*, the "breathing wrap"; *Pliofilm*, an excellent vapor barrier, important in meat and cheese packaging; *vinyl* film, now increasingly used for textile packages; *saran*,

¹Distinction between "film" and "sheet" is in gauge; three mils and over generally is considered "sheet."

*The flexible container that gives complete product visibility
is the boom baby of postwar merchandising,
with volume up 459% in 10 years—and cost moving down*

packages

Portion packaging has multiplied number of film packages in recent years. Illustrated below are 15 typical food products packaged in film for individual servings.

PHOTO COURTESY DU PONT



Typical uses of 15 different packaging films

PHOTO COURTESY BAKELITE



Cellophane's biggest single user is bakery field. Coated it is resistant to grease and moisture. (Bag by Dobeckmun)

PHOTO COURTESY NEPA



Polyethylene offers strength, durability and low cost; it is used for the heavy-duty jobs.



Cryovac, a modified saran film that is shrinkable to skin-tight fit under heat, is widely used for frozen poultry.



Acetate is valued on certain produce for its "breathing" qualities and unwrinkled clarity. (Wrap printed by Dobeckmun)

PHOTO COURTESY NEPA



Pliofilm envelope for children's slippers is a durable, permanent container. (Film by Goodyear; printed by Milprint)



Polyethylene-coated cellophane makes a highly resistant package for Buick automotive parts. (Bags by Cadillac Products)



Saran-coated cellophane is effective material for use as a grease and moisture barrier. Its moderate cost is in its favor. (Bags by Dobeckmun)

the lowest of all in water-vapor and gas permeabilities; *Cryovac*, a heat-shrinkable blend of saran resins that is widely used for skin-tight packaging of poultry and meats—and, recently, a potential front-rank contender, *polyester* (Mylar and Scotchpak), with exceptional clarity and strength even in very thin gauges.

The most significant factor in the film package's growth undoubtedly has been the great trend to self-selection selling. The product in transparent film is its own best salesman.

Recently, new films and improvements in old films have brought great strides forward in such packaging concepts as vacuum packaging, gas packaging and cook-in-the-bag packaging.

An increasing amount of film is being used solely for protective reasons in lamination with, or otherwise in combination with, opaque materials such as foil, paper and paperboard. Such packages are beyond the scope of this article. The term "film package" is used throughout this article as applying to

transparent packages made primarily of films, including combinations of transparent film materials through coating or lamination.

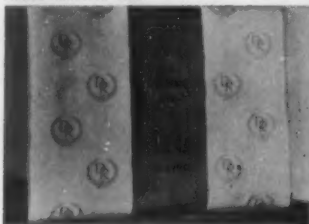
THE PACKAGE

A converter supplies film packaging either as a formed bag or envelope, or as a printed roll which can be made into a pouch, packet or wrap at the packager's plant, either before or during the filling operation.

The three biggest converted-film packaging items—cellophane bags, polyethylene bags and printed cellophane rolls—according to Bureau of the Census figures, cost packagers \$136½ million in 1955 and \$155½ million in 1956.

Sales for printed cellophane rolls are climbing much faster than for cellophane bags, with rolls currently representing 65% of total converted cello-

PHOTO COURTESY NFPA



Vinyl provides a clear and durable wrapping material for heavy textiles, needing long shelf life. ("Vitaform" by Goodyear; flexographic printed by Package Products, Inc.)

PHOTO COURTESY NFPA



Saran has the lowest WVT and exceptional grease resistance. Here printing is trapped between two plies of film. (Saran by Dow; printed by Tee-Pak, Inc.)



Polyester—a super-strong, super-clear film—found one of its early uses on spaghetti and macaroni products. ("Mylar" film by DuPont; printed by Milprint)



Polyethylene-coated polyester film makes a liquid-tight bag which is resistant to pickle brine. (Bag by Dobeckmun)



Polymer-coated polyester is a new, heat-sealable version of the super-strength film, gives long-life protection to boxed gift set. (Film by DuPont)



Shrink-type polyester demonstrates remarkable strength in being drawn down over sharp-edged shell decoration on this Cannon towel gift set. (Film by DuPont)

phane sales. In polyethylene, probably not much more than 15% is being sold in printed rolls.

The typical film package is either a prefabricated bag or a pouch formed in the packager's plant on high-speed equipment which at the same time fills and seals. Pouch packages can be made as small as a postage stamp, or big enough to hold 10 lbs. of potatoes. Packages, primarily transparent, which are formed by bagging or wrapping the product—usually in trays or U-boards—are also considered here as film packages.

The chief distinction of a film package is, of course, transparency. Even polyethylene, once considered "cloudy," is approaching the clarity of cellophane with some of the newly developed resins. Often "contact clarity" is all that is required in packaging applications and this has so far accounted for polyethylene's acceptance.

Obstacle after obstacle in product application has been overcome with such developments as extrusion coatings (polyethylene on cellophane and saran

resins on cellophane, polyethylene and polyester) and laminations of two or more films.

Such unions of different film materials permit one to supply qualities in which the others are weak, so that a film package can be engineered today to meet almost any conceivable requirement. Films can be made to "breathe," hold gases, withstand boiling water or hold fats and oils.

Volume-wise, polyethylene-coated cellophane is today's most important combination material. The coating adds strength, life and liquid-holding qualities. It is responsible for most of the unit- and pouch-packaging of liquid and viscous products—a field which is growing rapidly.

Film packages require a minimum of shipping and housing space, having as high as an 80 to one storage space-saving factor over some containers. At the store level, inventorying and stock selection are easy, since the product is visible.

Consumer convenience has been another advantage which has helped sales of easy-to-open film



Demonstrating exceptionally great strength of polyester film, an automobile is suspended in a sling of 3-mil film. Clarity and "stiff" handling are other characteristics that make polyester important among the newer films.



PHOTO COURTESY MINNESOTA MINING & MFG. CO.

Boilability is another characteristic of polyester film—now made in heat-sealable form—which is boosting its use for the increasingly popular heat-in-the-package convenience foods.

bags. In an increasingly littered world, the film package offers the advantage of space-saving disposability. The re-use feature of long-lived polyethylene bags has stimulated housewives to reach for this kind of package in the supermarket and more recently in other retail stores.

The film package's chief drawbacks in the store are inability to stack and, in some cases, susceptibility to puncturing and tearing. The newer polyethylene and polyester packages do not have the latter drawback. To meet the stacking problem, some packages have gone to hang-up bags with punched-hole paper headers; this is, in fact, one of the biggest current trends in film packaging.

DEVELOPMENTS

Fierce competition has characterized the film converting industry. The NFPA, which represents 113 of the larger firms in flexible-package manufacturing, estimates that there may be as many as 350 film converters throughout the country. Many converters serve only regional markets, though a dozen or so of the largest have branch plants and are fully national in scope.

Competition and volume have combined to keep converted-film prices in check, although in raw-material form only polyethylene has shown a notable

price decline. Where price increases by film producers have been necessary, they have been comparatively small due to increasing volume. The converter's efficiency has generally improved through better quality control, higher printing speeds and improved converting machinery.

The nation's rich food basket accounts for an estimated 70% of film packages. Bakery products, produce, meats and poultry, confectionery and gum are the big users. But still only about 15% of produce, 25% of meat and 35% of poultry are being pre-packaged in film, so the food field still has plenty of room for film-package expansion.

In the non-food area, a notable rise in textile film packaging is being followed by rapid growth in film wrapping and bagging of hardware. Films in non-foods have immense expansion possibilities—and are already expanding notably in drugs, cosmetics and chemicals.

THE INDUSTRY

Things are moving so fast in the film-packaging field that scarcely a month goes by without news of a significant development.

Great strides have been made in improving existing films by applying four types of modifications for adapting them to specific purposes:

1. New and modified base film resins.
2. Physical (molecular) modifications.
3. Coatings.
4. Laminations.

Cellophane's properties have been radically extended since its introduction as a simple, transparent, non-heat-sealable, non-moistureproof film. Water-vaporproofness, heat sealability and a host of other characteristics have been added through basic lacquer coatings applied by cellophane manufacturers. The latest addition to the many-membered cellophane family is a non-fogging film.²

Since polyethylene's civilian-packaging birth only 10 years ago, its most significant development has been adding printability to the film. This has been achieved through surface treatment of the film to permit ink to adhere. At least one converter is now running halftone reproductions on polyethylene.

Improved inks and printing methods have been created for a number of other films. Transparent films offer the advantage that they can be printed on either the outer or the inner surface, the latter "reverse" technique permitting display of the printing through the glossy and protective film. In the case of coated or laminated films, the printing can be protected on both sides. One of the latest printing developments for short runs or special in-plant imprinting is the transfer-printing method of therimagraphy.³

The dividing line between developments and future possibilities is narrow, since some developments have been perfected and are still awaiting commercial production or practical application. A brief list of some film improvements that have only recently reached the market indicate the fast pace being set by these packages:

- ▶ Polymer (saran) coatings for cellophane, polyethylene and polyester.⁴
- ▶ Heat-shrinkable polyethylene and polyester for meats and poultry.
- ▶ Heat-sealable polyester.
- ▶ Clearer, stiffer polyethylene, with better machine-handling qualities.
- ▶ Ultra-thin gauge polyethylene, made and printed by the converter from the resin.

WHAT'S AHEAD

Self selection in all mass-marketing outlets will call more heavily upon film packages to let the product itself be its own informative salesman. Con-

²See "Non-Fogging Cellophane," *MODERN PACKAGING*, March, 1957, p. 170.

³See "Printing by Transfer: A New Method," *MODERN PACKAGING*, Aug., 1956, p. 138.

⁴See "Saran-Coated Films," p. 151, this issue.

Cover picture

The photograph on this month's cover shows the dramatic moment in production of saran film when compressed air forms a "bubble" in the extruded tube to stretch and orient it. Rollers guide the extended film into proper position for deflation, slitting and winding.

verters will be asked to solve more critical packaging problems than ever before.

The great virtue of cellophane, and the great drawback of all the "soft" plastic films up to now, has been machinability. Cellophane has the rigidity and easy slip which permit it to be "pushed" through machinery at high speed. Ordinary polyethylene, on the contrary, is a "limp" film requiring special handling at slower speeds; it has made its great growth in spite of this, because of its durability and low cost.

But now, thanks to new resin formulations, polyethylene can be made with a wide range of stiffness. And polyester film has an inherent stiffness comparable to that of cellophane.

The great drawback of cellophane is that on aging it can lose its moisture and become brittle. It is, therefore, losing to polyethylene and polyester films the applications to heavy and sharp-edged products and those requiring a lengthy shelf life.

But all indications are [Continued on page 216]

Quality control by converters assures performance of film packages. Here a technician places samples of printed film in humidity cabinet to test constant high relative humidity characteristics.



PHOTO COURTESY MUPRIFF



Baling machine, which is air operated, pushes 10 of the 5-lb. bags of flour into the semi-rigid container.

5-lb. baler bags are positioned in baler magazine. In background, additional bags are coming in by conveyor.

Semi-rigid shipper

New single-ply kraft paper container loaded with unit packages in a baler machine saves flour-milling firm

\$24,000 a year in production, labor and shipping costs

By switching from hand packing of individual flour packages to automatic packaging of these items in a new kind of semi-rigid, kraft-paper shipping container, Standard Milling Co., Kansas City, is profiting from a packaging system which reportedly is saving the firm approximately \$24,000 annually in production and labor costs, plus reduced shipping costs at its flour-milling plant in Buffalo, N. Y.

The new packaging system, although designed for small family-sized packages of flour, is suggested for other applications where a strong, economical shipping container is needed for multi-unit consumer packages. The system employs two main items: (1) the semi-rigid container made of a single ply of resilient, heavy-duty kraft paper and (2) an air-operated baling machine plus a conversion kit of parts. With the conversion kit it is possible to adapt existing case sealers to the sealing of semi-rigid containers.

The principle of the semi-rigid container is one of internal self-support, according to the supplier. The family-sized flour bags, which are not rigid in themselves, become rigid when tightly compressed

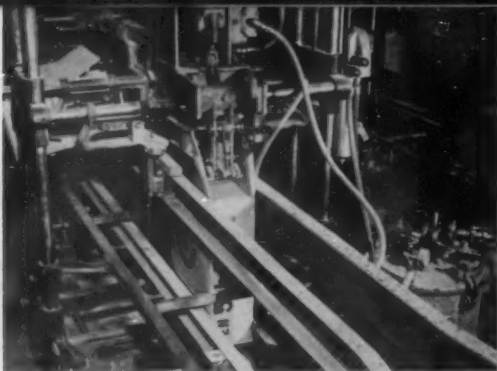
into the semi-rigid container. And because the entire unit is rigid, it does not lose its shape in storage.

A high degree of over-all strength and shock resistance apparently is provided by the semi-rigid container. Stresses of loading, mixed shipping, rehandling and high stacking are distributed equally to all inner package surfaces.

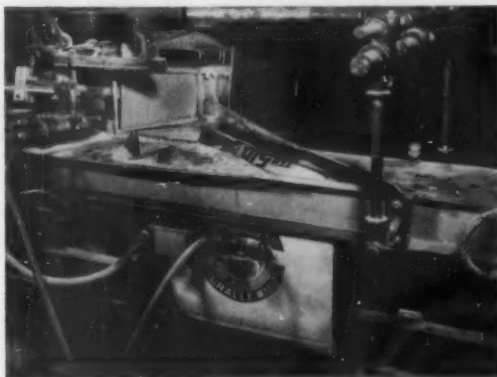
At Standard Milling Co., semi-rigid containers are five cents a package cheaper than corrugated cartons, resulting in a saving of \$20,000 annually, the company says. In most instances, semi-rigid containers are approximately half the cost of fibre-board boxes with similar capacity.

Due to the lower tare weight of the semi-rigid containers, approximately one pound for each 50-lb. container of small packages is saved. This results in a substantial saving in freight costs. Both empty and filled containers require less space than corrugated boxes, thus reducing over-all storage costs. Another advantage cited for the semi-rigid container is a much sharper reproduction of the multicolor brand name.

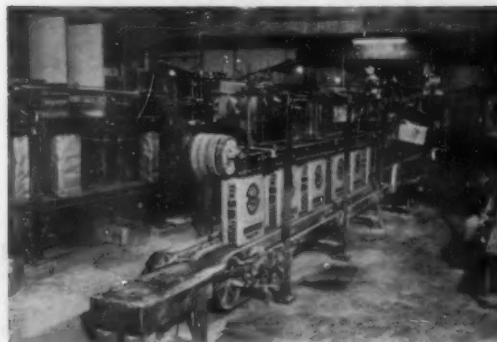
Standard Milling Co. is using three balers to



Filled containers are discharged from conveyor ready for sealing. Timing mechanism allows the semi-rigid containers to move at a uniform rate of speed toward flap folders and spray gun.



Close-up shows detail of sealing unit.



Compression unit assures a tight, well-dried seal. Total time for baling, conveying, sealing and drying averages less than two minutes.

Uniform shape permits easy and neat stacking of bags on pallets.



package its Ceresota and Heckers brand bakery and family flours. Adoption of the automatic equipment means one less operator on three baler lines at a saving of \$4,000 a year.

Here's how the system works: At the start of a baling cycle, the operator places a semi-rigid container on the duck bills (guiding units which hold the container open while the units are being inserted) and stacks in bale pattern the required number of small packages in the baler machine.

When he presses the starting button, a compression plate at the far side of the magazine squeezes the small bags against an opposite stationary plate to align them with the mouth of the duck bills and to shape them to the correct width for easy insertion in the semi-rigid container.

Simultaneously, the duck bills open and a hinged table beneath swings up to a horizontal position to hold the semi-rigid container in place and to support it during filling. A pusher plate attached to a piston rod at the rear of the magazine drives forward and pushes the bags in their bale pattern into the semi-rigid container.

When the pusher plate retracts, the bale-support table swings down and the tightly filled semi-rigid container moves to the baler sealer as all parts of the baler return to their starting positions ready for the next cycle.

Total elapsed time for baling, conveying, sealing and drying a semi-rigid container averages less than two minutes.

Additional equipment is presently being developed for Standard Milling Co. to eliminate the manual loading of charges and the manual placing of the semi-rigid containers on the machine. This is expected to result in even more substantial savings by reducing labor costs and increasing the rate of production.

Credit: Semi-rigid containers and baler machine by St. Regis Paper Co., 150 E. 42 St., New York 17.

Under stress of multiple tiering, semi-rigid containers retain their shape. High strength at lower cost is a major advantage.





Lipsticks on pegboards

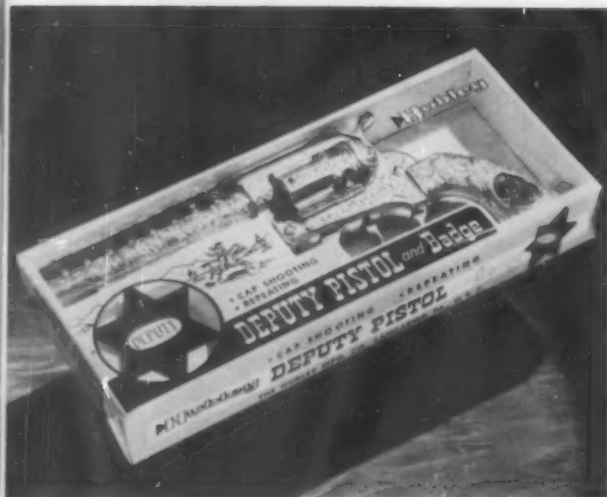
For pegboard display in supermarket outlets, Northam Warren Corp. has devised a pilferproof package of unusual construction for Cutex Sheer Janolin Lipstick. It consists of a sealed transparent acetate tube similar to those used for packaging tooth brushes. Inside the tube is a long printed strip of paperboard die cut to hold the lipstick case. The paperboard, extending through an opening in the top closure of the tube, has a die-cut hole for hanging the package on a pegboard. There is no way to handle the lipstick without destroying the package. And the bulk of it helps to discourage pilferage.

Red acetate is used to close the top and bottom of the transparent tube. The inner paperboard label is printed in a shade of red that is the actual shade of the lipstick enclosed in the metal case. Copy above the lipstick includes trade and product name, shade of lipstick packaged and a drawing of lips. Beneath the case appears the slogan, "World's creamiest, longest lasting," followed by an outline drawing of a pair of shears and a dotted line with the words, "Cut here." To open the tube, the purchaser cuts right through the package and label at that point.



DESIGN HISTORIES

Multicolor printing broadens use of polyester film



Five-color gravure printing on polyester film has been used successfully and effectively on this open-faced carton overwrap for a child's Deputy pistol and badge set manufactured by The Hubley Mfg. Co. Heretofore, printing on polyester film in full color has been a problem and designs generally have been restricted to simple ones in only one or two colors. Successful use of full-color printing on polyester film undoubtedly will open up many new applications for its use. The wrap design allows full visibility of both the pistol and the badge. The film was selected for use as an overwrap in this instance because of its strength to assure continual protection to the heavy toy even after the rough handling to which it is subjected on retail toy counters. The wrap is applied to the open-faced tray carton by an automatic machine in the plant of the toy manufacturer.

Credits: Printed overwraps by Shellmar-Betner Flexible Packaging Div., Continental Can Co., 100 E. 42 St., New York 17. "Mylar" polyester film by E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del. Automatic packaging machine by Hayssen Mfg. Co., 1035 St. Clair Ave., Sheboygan, Wis.



Heat-and-eat sausages

A disposable, formed aluminum foil tray with die-cut and printed transparent polystyrene cover has been adopted by Stahl-Meyer, Inc., for new pre-cooked, pre-shrunk Brown 'N Serve link sausages. To prepare, the purchaser has only to pry up crimped edges of the foil tray, lift the cover off and place the pan on the stove to heat for three minutes. There are no pans to wash, since the tray is disposable after use. Bottom of the foil tray is formed to the shape of the sausages, with ridges made to hold four sausages horizontally on the two sides and one sausage vertically in the center. This not only keeps the sausages in orderly arrangement for display in retail outlets, but also is reported to be an advantage in the cooking process. Any grease resulting during cooking is confined within the individual ridges and does not run over into other areas of the tray.

The company believes that the switch to this package from the former pouch will be justified by the greater sales volume anticipated, despite higher container cost.

Credits: "Cook-tainer" tray by Ekco-Alcoa Containers Inc., Wheeling, Ill. Covers made of Plax Corp.'s "Polyflex" by Wrap-ture, Inc., 133-30 32 Ave., Flushing 54, N.Y.

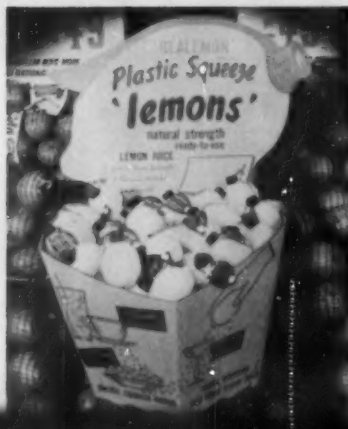
DESIGN HISTORIES



Polyethylene lemon

The ReaLemon-Puritan Co.'s new polyethylene plastic squeeze container for ReaLemon brand reconstituted lemon juice is a replica of a real lemon—lemon shaped, lemon colored and molded with a stippled surface to resemble the peres of an actual lemon. To complete the illusion, the container has a label shaped like a lemon leaf. A jumble display of the "lemons" is effective in produce sections and at check-out counters of grocery stores and supermarkets in a three-color-printed, basket-type corrugated merchandiser. The container has a polyethylene plug fitment with a single opening for squeeze dispensing and phenolic screw cap with vinyl lining. The tear-resistant label, made of 80-pt. latex-base paper, is die cut to fit over the neck of the container. Label printing is in four colors.

Credits: Containers by Royal Mfg. Co., Inc., 200 Granite St., Prescott, Ariz., and Plasticite Corp., 327 Rider Ave., New York. Closures distributed by Berman Bros., Inc., 1501 S. Laflin St., Chicago. Label by Wheeler-Van Label Co., 13-21 McConnell St., S. W., Grand Rapids, Mich. Display by Stone Container Corp., 4200 W. 42 Pl., Chicago 32.



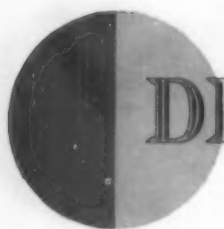
Gift-boxed sets spur sales of household linens



Effectiveness of a set-up box to upgrade a product for selling as a gift is illustrated by Dan River Mills' new gift boxes for sheet-and-pillowcase sets, designed to harmonize and complement the company's standard-line packaging. The result of this approach, the company reports, is a "gratifying" increase in sales—not only of the gift-packaged sets, but of standard-line items purchased by recipients of the gift-boxed linens.

The subtle and delicate design of the new set-up gift boxes emphasizes beauty and quality of the product inside. The simplified cover design avoids the "commercial" look and enhances the gift appeal. Decoration is confined to an outline wreath design, in the center of which appears the Dan River name. Script lettering in the lower right corner identifies the type of product enclosed. The Dan River name and product type are repeated on the half-tray inserts in the box base. Open, the rectangular box provides maximum area to highlight the colors and styles of the linens.

Credit: Set-up box by Old Dominion Box Co., Inc., Lynchburg, Va.



DESIGN HISTORIES



'Cup of Youth' goblet

A milk-glass goblet provides an intriguing and appropriate container for a new Max Factor product called "Cup of Youth," a face-cream formulation for the correction of dry and aging skin, designed for the "over-30" market. Simplicity of the goblet's design heightens its appeal as a decorative complement to the dressing table.

The goblet features an "MF" trademark by applied color labeling. The only other decoration is an oval-shaped foil label on the base of the container. The jar cover is a white urea plastic closure.

The folding paperboard carton in which the goblet is packaged carries a reproduction of the goblet in milk white against a background of "Max Factor blue."

Cup of Youth is currently being supported by full-page, four-color ads in fashion magazines.

Credits: ACL goblets by Hazel-Atlas Glass Co., 15 & Jacob Sts., Wheeling, W. Va. Foil labels by Archer Label Co., 783 Kohler St., Los Angeles 21. Urea closures by Armstrong Cork Co., Lancaster, Pa. Cartons by Continental Can Co., Inc., Gair Boxboard & Folding Carton Div., 155 E. 44 St., New York.



Skin-packed socks

The unlimited applications for skin packaging in an increasing number of fields is evidenced by its adoption for men's hosiery. Two pairs of Boulevard hose for men are now skin packaged as a unit.

This economical package is aimed at increasing volume through sales in multiple units. It offers advantages both to the retailer and to the consumer. Transparency of the package, formed of 0.003-gauge vinyl, provides product visibility, yet the hose are protected against shopwear and handling. The card provides a rigid package which is convenient for retailers to display on counters in a minimum of space. In self-service outlets, this skin package is especially effective, since it contains all the information needed by the shopper.

The printed card, in addition to displaying the trade and product names, clearly indicates that the package contains two pairs of hose and points up advantages of the product: "Knit of soft spun cotton for long wear and comfort."

Credits: Card by The New Haven Board & Carton Co., 259 East St., New Haven 8, Conn. Skin packaging by Shaw-Randall Co., Inc., 39 Sabin Ave., Pawtucket, R.I.

DESIGN HISTORIES



Strong symbol for beer

A design that gives the kind of strong identity demanded today for mass display now distinguishes the packaging for Lucky Lager beer, sold in the Western states by the Lucky Lager Brewing Co. The counterplay of metallic gold and red on opaque white conveys a higher-quality look and, supposedly, new appeal to the female shopper.

Focal point of the design is the "X" symbol, a carry-over from the former design. However, the "X" is now represented by a crossing of red ribbons. On the new, tall, half-quart can, the red ribbons appear against a gold metallic motif of hop leaves. The design features more white space and a gold border at the bottom.

The six-packs, which also use the traditional red and gold, have been given zest by a third color, turquoise blue. When the six-packs are stacked on the floor for display, as illustrated, they present a striking effect with pleasant symmetry of form and color that commands attention. The same design is used for labels and caps of the bottled beer.

Credit: Design by Walter Landor & Associates, 143 Bush St., San Francisco 4.

The frozen sandwich

New foil-wrapped, cartoned, ready-to-eat items provide new lunch-box convenience and an interesting new market for the frozen-food packer



Appetite appeal is created by brilliant, mouth-watering illustrations of sandwiches on Fradelis cartons. The Los Angeles company has three kinds of frozen sandwiches on the market, all wrapped in checkerboard-design printed aluminum foil. Four-color illustrations run along the top and the sides. Cooking instruction on bottom of the carton suggest the sandwiches for lunch-box serving as well as for home and picnic use.

The frozen sandwich, already here, is not limited to quick heat-and-eat meals at home or on picnics. Its package suggests that mother tuck it in the lunch box for dad or the children.

Lunch-box convenience may open up a potential new market for this particular frozen food. Reason: the frozen, meat-laden sandwich can be served not only hot, but also cold, after a three- or four-hour thaw during the morning.

At least three packers are wrapping and cartoning such favorite hearty American sandwiches as turkey or beef with barbecue sauce. Others are marketing "nationality" specialties like an Italian "Hero" or kosher corned beef.

Sandwiches are first wrapped in aluminum foil, which functions both as a blanket to hold the sauce and sandwich ingredients and also as a heat conductor during warming. Usually sandwiches are packaged two in a carton.

On the West Coast, the Fradelis Frozen Food

Corp. of Los Angeles offers three frozen descendants of the Earl of Sandwich's invention: corned beef on rye, pastrami on French roll and frankforts. The pastrami is garnished with a special sauce; the frankforts come with chili sauce and American cheese, though these are not recommended for cold serving.

The Fradelis frozen sandwich first is wrapped in 1-mil aluminum foil gravure printed in a checkerboard pattern, with the company and sandwich name integrated into the design. If the carton is discarded before a sandwich is packed in a lunch box, there is still product and company identification on the foil wrapper.

The carton is a moisture-resistant waxed board with a four-color photo of the product lithographed on the top. Additional color reproductions are on two sides, and cooking and serving directions are printed on the bottom.

In St. Louis, the Banquet Canning Co. is selling

two cartoned turkey sandwiches in its marketing area. The sandwiches are foil wrapped and a four-color reproduction is used to show a closed and open-face sandwich. The carton is high-gloss paraffin paperboard of 15-pt. solid virgin bleached sulphate kraft.

On-Cor Food Products of Chicago has been selling a beef sandwich with barbecue sauce and recently introduced an Italian-style beef sandwich with gravy. Both are on French rolls. Like the other frozen bread and meat combinations, the On-Cor sandwiches are foil wrapped and packaged in a four-color paraffined carton.

On-Cor has added two interesting variations in its packaging. To heat the beef more quickly, one edge of the foil wrapper is placed in the sandwich next to the meat before it is wrapped around the two slices of French rolls.

After the first sandwich was on the market, the company found that some customers like a soft bun and others like to eat a hard French-roll sandwich. To give customers improved supplemental directions to prepare the sandwiches either way, On-Cor printed an instruction sheet that was slipped into the carton. This saved an expensive carton-reprint job and also answered a customer need.

Other companies are reported to have additional frozen sandwiches on the market that may be aimed at the lunch-box trade. A West Coast firm is test marketing a barbecue sandwich, the Palestine Kosher Sausage Mfg. Corp. of Chicago has six frozen meats for sandwich ingredients and an Italian company in New Jersey is freezing a Hero sandwich.

Indications are that the frozen sandwich may become a familiar item in the lunch box and offer a new market for frozen-food packagers.

Credits: *Fradelis cartons by Milprint, Inc., 4200 N. Holton St., Milwaukee 1. Banquet carton by Gaylord Container Corp., Div. Crown Zellerbach Corp., 111 N. Fourth St., St. Louis 2. On-Cor cartons printed by Chicago Offset Printing Co., 610 W. Van Buren St., Chicago, and assembled by Ferguson-Lander Box Co., 740 Prairie St., Aurora, Ill.*



Two sandwiches to the carton seem to be the preferred sales unit. Banquet Canning Co. of St. Louis is pushing its turkey sandwiches as "ideal for quick lunches at home, work, school." Like other cartons for frozen sandwiches, a four-color illustration is used by this company.



For better heating results, one edge of the aluminum foil wrap on French-roll sandwiches of Chicago's On-Cor Food Products is placed in sandwich next to meat. The remainder is wrapped around the rolls. On-Cor supplements original heating instructions with a printed insert giving suggestions for serving either hard- or soft-roll sandwiches. Sandwich uses are illustrated on flap opening. Directions for cold serving suggest sandwiches for school lunches or lunch boxes.

The bag that couldn't be

Gussets up to 9 in. wide give Cyanamid's multiwall a new and more efficient shape; used with a filler that densifies as it fills, it cuts cube of each unit load by 20%



Same ton load of MBTS rubber chemical is obtained with new bag and stacking pattern that provides a more stable unit load in one-fifth less space.

A paper bag that "couldn't be made" has speeded up packaging of a valuable industrial chemical and has simplified handling, shipping and storage for both manufacturer and customers as the result of American Cyanamid Co.'s "Operation MBTS."

Together with a specially adapted vacuum-filling machine that reduces the bulk of the package about 20% simply by drawing out useless air, the new-type multiwall bag has made possible a far more secure 40-bag unit load that occupies about one-fifth less space in shipment and storage.

MBTS is one of the so-called "fine" chemicals used to accelerate vulcanization in the manufacture of most rubber products. It is a light-colored, free-flowing powder known to chemists variously as "2,2'-Dithio-bisbenzothiazole," "2-Benzothiazolyl disulfide" or simply "Benzothiazyl disulfide."

Insoluble in water and stable at moderate tem-

peratures, MBTS has long been packaged in 50-lb. gusset bags of four-ply kraft, taped and stitched at the ends, with a tuck-in sleeve valve of creped kraft for filling.

The development of wider-gusset bags of optimum size and shape for unit loading spurred improvements in the packaging operation and in the product itself. As a result, American Cyanamid's Rubber Chemicals Dept. has launched what the company believes is the first sales promotion campaign based on r. packaging development for such a material.

Satisfactory packaging of other materials in the new wide-gusset bags has also been reported by the company, suggesting further applications in the industrial chemical packaging field.

These achievements evolved from the company's experiments with unit-loading techniques over the past decade. At first, cost and weight of wooden

pallets tended to confine such efforts to in-plant materials handling. Then, inexpensive sheets of flat fibreboard proved strong enough to support a 1-ton load of bags, for example. Lift trucks with chisel forks could then load stacks of MBTS in truck trailers for shipment in a fraction of the time required for hand loading.

But this called for a redesign of the package. Bags then used for MBTS had to be arranged three to a layer, making a stack that was not very stable even though bags were secured with adhesive. A new bag shape was also needed to form unit loads that would make more efficient use of truck and warehouse space.

Temporarily, a stovepipe-shaped bag measuring 40 by 13 in. with 5½-in. side gussets was adopted for the 50-lb. MBTS charge. The 2,000-lb. unit load consisted of 10 four-bag layers. MBTS is a fluffy substance, however, and air exuded as the stack settled left the bags somewhat flabby. The bags were awkward to handle.

To package 50 lbs. of MBTS for more efficient unit loading and easier handling, a bag with side gussets even wider than the 6-in. valve was needed. Bag makers insisted such a bag could not be manufactured. The need grew more pressing as new equipment was installed to produce MBTS.

Finally, one company agreed to try the "impossible" and managed to make 3,000 bags of three different sizes with 6-in. valves and gussets 7 or 8 in. wide. The original order was turned out almost completely by hand, but machines have now been adapted to make bags with gussets up to 9 inches.

Almost simultaneously, American Cyanamid packaging representatives discovered a vacuum-type packing machine that increases the density of MBTS about 20% by drawing air out of the bag between charges in the filling process. This permitted use of even smaller bags and reduced the possibility of bags becoming flabby in the unit load.

MBTS is now packaged in 16-by-30-in. bags with 7½-in. side gussets and tuck-in sleeve valves of 6½-in. diameter to fit the nozzle of the new packing machine. A metal shroud encases the bag when mounted for filling. By alternately charging the bag with MBTS and drawing out air to densify the powder, the new vacuum filler packages MBTS more compactly in about one-third the time previously required.

Weighed automatically to close tolerance in the filling machine, MBTS packages are also checked weighed by hand to assure accurate loads of the costly substance. Occasionally a little MBTS must be added or removed through the valve sleeve with a cylindrical trowel called a "thief." The valve sleeve simply tucks inside to close the bag.



Densification of product is part of secret of space saving. New vacuum packer reduces bulk of each 50-lb. charge of powder 20% by withdrawing air during filling.

Shaped to form five-bag layers on the standard-size disposable pallet, the new bags are stacked in unit loads as they are filled. Glue applied as bags are stacked increases the stability and shears instead of tearing when the bags are pulled apart.

Densification of MBTS and packaging in the wider-gusset bags has cut the space occupied by a 1-ton unit load by one-fifth. The 42-by-50-in. pallet which permits side-by-side unit loading in standard-size truck trailers remains in use. But now eight layers of five bags each hold as much MBTS as 10 four-bag layers of the "stovepipe" bags. With greater stability and lower height, the new unit loads can be stacked two or even three high in warehouses, the company reports.

Credits: Bags made to specifications by Fulton Bag & Cotton Mills, 1400 Annunciation St., New Orleans 13, La. Vacuum-packing machine by Carter Engineering Co., 123 N. Hazel St., Danville, Ill.

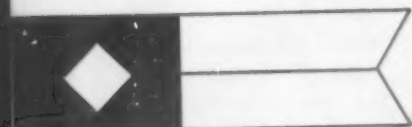
Greater stability of new unit load resulting from wide-gusset bag facilitates handling by fork trucks, encourages stacking more compact loads two or three high to save warehouse space.





Packaging

Pageant



Packaging

Pageant



Packaging

Pageant



1

2



3



4



5

6



- 1 Private-mold, 24-oz., "patio-sized" new glass containers for Louis Maull Co.'s barbecue sauces are designed to fit in with modern casual outdoor living. Bottles and lug caps. Anchor Hocking Glass Corp., Lancaster, Ohio. Shrink-type cellulose bands, The Celon Co., Muscatine, Iowa. Paper labels, Koelle-Mueller Label Co., St. Louis, Mo.
- 2 Gold-colored foil laminated on both sides with cellophane gives metallic brilliance to tear tapes. Important user is American Tobacco Co. for new Hit Parade cigarettes. "Zip-Tape," Dobeckmun Co., Cleveland, Ohio.
- 3 A dummy carton with wing-shaped paperboard easel creates an unusual counter unit for a jar of Bonne Bell cosmetic cream. Display, Continental Can Co., Inc., Gair Boxboard & Folding Carton Div., New York.
- 4 Spiral-wound containers made of polyethylene film laminated between two sheets of kraft for side insulation prevent power dissipation and leakage of Bright Star Industries' new No. 10M leakproof battery. Laminated stock, Lowe Paper Co., Ridgefield, N. J., using Lowe's Polycon polyethylene. Printed acetate label, Continental Can Co., Inc., Shellmar-Betner Div., Mt. Vernon, Ohio.
- 5 Strong, uncluttered design of the new label for cans of Milnot, used as cream in coffee and for cooking, illustrates appetizing dishes that may be made with the product. On reverse side of the label are cooking recipes. Design, Robert Sidney Dickens, Inc., Chicago. Labels, Epsen Lithographing Co., Omaha, Neb.
- 6 Appetite-appeal illustrations are five-color printed on Mead-Co Co.'s potato-chip bags, made of 0.00035-in. foil laminated to 8-lb. tissue laminated to 25/26½ waxed, one-side-bleached glassine liner. Bags, Milprint, Inc., Milwaukee, Wis., using foil by Aluminum Co. of America, Pittsburgh.
- 7 A physician's sampler for bottles of Lloyd Bros.' Doxinate 240 mg. and Doxinate with Danthron gelatin capsules is a side-opening carton having mirror and interior shelves to resemble a miniature medicine chest. Carton, C. W. Zumbiel Co., Cincinnati. Amber bottles, Owens-Illinois Glass Co., Toledo. Lithographed closures, Phoenix Metal Cap Co., Chicago. Paper labels, John S. Swift Co., Cincinnati.
- 8 Large, easy-to-read type and vivid colors give quick identity to Miller's Super Markets new family of 12 waxed-paper bread wraps, six of which are illustrated. Wraps, Marathon Corp., Menasha, Wis.
- 9 Purity Mills' "Popeye" popcorn now comes in new 12½-oz. resealable oblong lithographed metal containers that enable 50% more popcorn to be displayed in the same space required for conventional round cans. Cans, American Can Co., New York.
- 10 Novel tilt-up construction of this folding box affords maximum effective display for Academy Ribbon Mills' Ribnary

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14

rayon curling ribbon for gift wrapping. Design, Hy Farber, Beverly Hills, Calif. Folding box, Acme Paper Box Co., Los Angeles.

11 A strong corrugated partition member cushions and protects two jars of W. T. Young Foods' Big Top peanut butter in a multiple-unit twin pack. Carton, New Haven Board & Carton Co., New Haven, Conn.

12 Two polyethylene film bags, one sealed within the other, provide a sterile package for bulk shipment of Chas. Pfizer & Co., Inc., antibiotics that reduces weight by 75% and bulk by 80%. Film, Visking Corp., a division of Union Carbide Corp., Chicago, using Bakelite polyethylene.

13 Strong brand identity for Chr. Hansen's Laboratory's "Junket" fudge-mix cartons is achieved with a bold new logotype and colorful product illustration. Design, Jim Nash Associates, Inc., New York. Cartons, Lord Baltimore Press, Baltimore.

14 Simplicity of this carton design for Scott Paper Co.'s industrial-towel line implies strength and quality and gives instant identity. Design, Nesbitt Associates, New York.

15 Lehn & Fink Products Corp.'s new 1-gal. cans for Lysol disinfectant, 35% lighter than former jugs, have easy-grip handles and spout closures. Can design, Emco Studios, New York. Can, Continental Can Co., New York. Carton, Gibraltar Corrugated Paper Co., North Bergen, N. J. Tear tape, Minnesota Mining & Mfg. Co., St. Paul, Minn.

16 Latest in convenience packaging is a polyethylene-cellophane bag for Armour & Co.'s bite-size cubes of Miss Wisconsin Cheddar cheese, with built-in pouch for tooth-pick spears. Film bag, Standard Packaging Corp., New York.

17 First of Tempting Foods' line of gourmet frozen foods on the market is Sandbergs Swedish Meatballs, packed in a foil container with full-color, appetite-appeal, varnished paper labels. Container, Ekco-Alcoa Containers Inc., Wheeling, Ill. Label, Muirson Label Co., San Jose, Calif.

18 A clear panel in this opaque, flexographic-printed, duplex cellophane bag for Guittard Chocolate Co.'s new Chocolate Milk Drops invites inspection of contents. Bag, Milprint, Inc., Milwaukee.

19 This striking full-color-lithographed box wrap for Barth & Dreyfuss' Royal Terry kitchen towel ensemble won a first award in the recent 7th Annual Lithographic Awards Competition. Design, Tinsley T. Jepson & Associates, Pasadena, Calif. Wrap, H. S. Crocker Co., Inc., San Bruno, Calif.

20 Octagonal corrugated shippers have less tare weight than former wooden barrels and eliminate occupational hazards for Westmoreland Glass Co.'s hand-made milk glass and fancy tableware. "Barrel pack" container. Gaylord Container Corp., Div. of Crown Zellerbach Corp., St. Louis, Mo.

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Packaging

Pageant



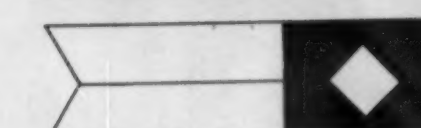
Packaging

Pageant



Packaging

Pageant



New force for glassware

Anchor Hocking's extensive line of pre-packs shows how protection of a fragile product can be combined with colorful design to pull sets from back shelves to up-front selling

Carry cartons get popular-priced tumblers out front in mass display, effective and efficient for special promotions.



Handsome leader in the line is a starter set of turquoise blue dinnerware in brown-and-turquoise-printed corrugated display box. Note how the engineering of protective inserts has been designed to show off all pieces in the set.

The kind of package upgrading that modern retailing of glassware demands today is revealed impressively in the extensive array of decorative consumer packages for table glassware that the Anchor Hocking Glass Corp. is offering this year to department, chain, variety, hardware and many other types of retail stores.

This firm is reportedly the largest producer of machine-made glass tableware in the world. And the literally hundreds of colorful packaged units the company is using today to market glass dinnerware, snack sets, tumblers, kitchen glassware and gift specialties illustrate pointedly the changes in merchandising since this company began pioneering packaged units a quarter of a century ago.

Back in the '30s, Anchor Hocking was among the first to offer pre-packs that provided retailers with convenient selling units that could be stocked behind the counter to fill orders for shoppers who made selections from open samples.¹

But these drab corrugated boxes—which simply identified contents with manufacturer's name, style and quantity—were a far cry from the elaborate presentation of display boxes, gift packages and carry cartons in the line today.

¹ See "China and Glassware," MODERN PACKAGING Industry Survey, Nov., 1956, p. 114.





Color-printed slots in die-cut platforms of gift boxes for tumblers help to show patterns of glassware to advantage, while holding each piece securely in place.

The current packages are no longer stacked behind the counter. They are designed as powerful self sellers to go right out front to encourage the shopper to help herself.

With the extension of self service and the universal demand of retailers for packaged glassware with display appeal to assure a higher-ticket sale, Anchor Hocking finds itself in the midst of a decorative packaging design program rivaling the cosmetic industry in glamour and restrained only by the meticulous engineering considerations necessary for the shipment and handling of delicate, fragile glassware.

A few examples of the company's design ideas and constructions, planned by a full-time, package-design staff which the company now must maintain exclusively for its table glassware division, reveal the strategy it uses to meet today's highly competitive requirements.

Typical is the adroit selection of colors used on a new corrugated display carton for the company's "Turquoise Blue" 12-piece dinnerware starter set. A background of chocolate brown contrasts pleasingly to set off the turquoise color of the dishes. Turquoise blue for the printing of product identification, sell copy and decorative elements complements the color of the product. The over-all effect is as attractive for a gift package as it is for store display.

The interior construction is also interesting. Protective inserts are designed for an arrangement of the 12 pieces in the carton to give the shopper a full view of contents. Early pre-packs did not do this, but experience in display packaging for counter selling has taught that the customer must be given an opportunity to see everything. Anchor

Candle illustrations on slots or "tongues" of platform to hold hurricane lamps in place create realistic effect, convey product use instantly.



Hocking has adopted similar interior constructions for all of its sets of glass dinnerware, custom designed for each individual assortment.

Sets of glass tumblers, fruit-juice glasses, cocktail glasses and others have been turned into fast-selling gift items by the use of colorfully printed telescope boxes of folding con- [Continued on page 218]

Credits: Corrugated boxes for Turquoise Blue dinnerware by The Ohio Boxboard Co., Rittman, Ohio. Folding boxes for tumblers and hurricane lamps, and carry cartons for tumblers by The Bradley & Gilbert Co., 650 S. Seventh St., Louisville 1, Ky. Box for ash trays by Columbia Paper Box Co., 338 W. Town St., Columbus 8, Ohio.

Contents identity is given on every package so that shopper, unassisted by salesperson, can tell immediately what each contains. Box states clearly: "Set of three ashtrays by Anchorglass."



Automated French fries

New automatic carton-filling and check-weighing equipment at Taterstate turns variation in size of frozen potato slices into an advantage, mechanizing packaging of this product for first time

Hand loading frozen French fried potato slices into a carton to a desired weight is a jigsaw-puzzle operation that takes time and patience. For a company like Taterstate Frozen Foods, Washburn, Me., which processes from 800 to 1,000 barrels of potatoes each day from October to June for packaging under many well-known national and private labels, many hand workers until recently were required to fill and check weigh cartons.

Installation of what is said to be the first automatic filling and check-weighing equipment for frozen French fries has helped Taterstate to maintain its packaging standards in the face of rising

labor costs and suggests new possibilities for packagers of many similar hard-to-handle products.

A few of the workers at Taterstate still spot check the weight of filled 9-oz. cartons, but most have been moved to more productive operations such as controlling machines, sorting, trimming or inspecting.

Taterstate's processing line is almost completely mechanized. The new carton-loading system bridged the manual gap between the freezing tunnel and the carton-closing machines. Speeding up the trip from freezer to cold-storage rooms, it helps to prevent the slices from thawing and forming clusters.

BEFORE

Hand loading frozen French fries into 9-oz. cartons after final inspection required several dozen workers at filling and check-weighing stations to handle the 800 to 1,000 barrels of potatoes processed daily at the Taterstate plant.



NOW

Automatic loading and check-weighing system (in background) has three units, each set to bulk fill and dribble fill cartons to weight at rate of 30 per minute. All but a few of hand-loading staff (who spot check carton weights) were transferred to other tasks.



Custom built, the automated system is comprised of familiar types of conveying, sorting, bulk-fill, dribble-fill and check-weighing equipment, but with special adaptations to this problem product. One of the unusual features is a vibrating conveyor which separates large and small slices and feeds them, respectively, to bulk- and dribble-fill stations. Each of three double-head loading units is adjustable to fill packages weighing from 9 oz. to 1 lb. and is set to average 30 cartons a minute in the two-stage filling operation. Speed controls are automatic, using electric eyes and microswitches to insure coordination between product and carton feed lines for maximum production. Magnets are strategically located along the processing line to pick out any possible metallic impurities.

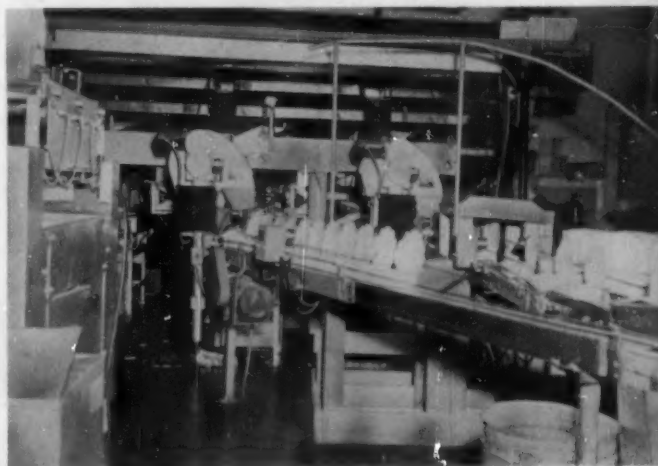
After final inspection as they emerge from the freezing tunnel, slices now move up an inclined conveyor to the vibrating conveyor and sizer that separates large from small cuts and feeds them accordingly to each of the three loading-weighing units. From three forming machines stocked with paraffin-coated, bleached sulfate paperboard blanks, cartons are automatically conveyed to a bulk-fill station where they receive large slices, then to a dribble-fill station where they receive just enough small slices to satisfy the automatic check weigher.

The mechanical process continues as cartons are closed, coated and overwrapped by machine with roll-fed waxed paper bearing the buyer's or packer's label. Corrugated cases holding 24 of the 9-oz. packages are code printed and sealed by machine, then conveyORIZED to the cold-storage room and palletized for the fork-lift truck operation. A conveyor that carries cases from the storage room right into a refrigerated railway car is the final step in automating frozen French fried potatoes—a big frozen-food item that previously had defied this kind of automatic packaging.

Credits: Filling and check-weighing system by Wright Machinery Co., Calvin & Holloway Sts., Durham, N. C. "Kliklok" cartons by Container Corp. of America, 38 S. Dearborn St., Chicago 3. Set-up and closing machine by Kliklok Corp., 405 Lexington Ave., New York 17. Overwraps by Western Waxide Div., Crown Zellerbach Corp., San Leandro, Calif.; Marathon Corp., Menasha, Wis.; Pollock Paper Corp., 2236 S. Cockrell St., Dallas 22, Tex., and Nashua Corp., 44 Franklin St., Nashua, N. H. Overwrapping machine by Package Machinery Co., East Longmeadow, Mass. Corrugated shipping cases by Container Corp.; Continental Can Co., Inc., Gair Fibre Drum & Corrugated Box Div., 155 E. 44 St., New York 17, and Kieckhefer Container Co., P. O. Box 710, Camden 1, N. J. Case-printing machine by Industrial Marking Equipment Co., Inc., 454 Baltic St., Brooklyn 17.



Sorting conveyor feeds large slices of frozen French fries to bulk-fill stations of three carton loaders; small slices go to dribble-fill stations.



Cartons machine formed of paraffin-coated paperboard ride conveyors to loading stations.



Check weigher electrically vibrates trough to dribble small potato slices into bulk-filled carton until scale hits the desired weight.



Cigar holders out front

Twenty-four cigar holders packaged in individually formed transparent acetate containers are brought out on the counter for self-service merchandising in this compact, easel-type display card. Each side of the easel holds 12 of the individually packaged Bryce brand "Softy" soft-rubber cigar holders made by the Bryn Mawr Smokers Novelty Co. The acetate containers protrude through the small die-cut openings on the face of the paperboard display card. The individual acetate packages remain "free," but are held in place between the two plies of the card by their flanges only. The customer helps himself by pulling out one through the opening on the card. This hygienic dispenser, low in cost, simple to assemble and handy to display in only a small space on cigar counters, is reported to have increased sales appreciably. Copy on the display card points up that the cigar holder is "sanitary packed." Six selling points appear in the center of the card between the two rows of cigar holders.

Credits: Thermoformed blisters by Plastic Container Div. of Plastofilm, Inc., Wheaton, Ill. Display card by Cooper Carton Corp., 4343 S. Ashland Ave., Chicago.

Display Gallery



Three-dimensional illusion

This flat, one-piece window display for Royledge, all-in-one shelf lining paper and edging made by The Royal Lace Paper Works, Inc., creates a three-dimensional illusion by the use of scored fold-backs. The door panel folds back, the rug section folds flat and the model illustration folds into the foreground. Made of paperboard, the die-cut and scored unit realistically illustrates in full color the product in use in a cupboard and at the same time shows a variety of patterns which are available.

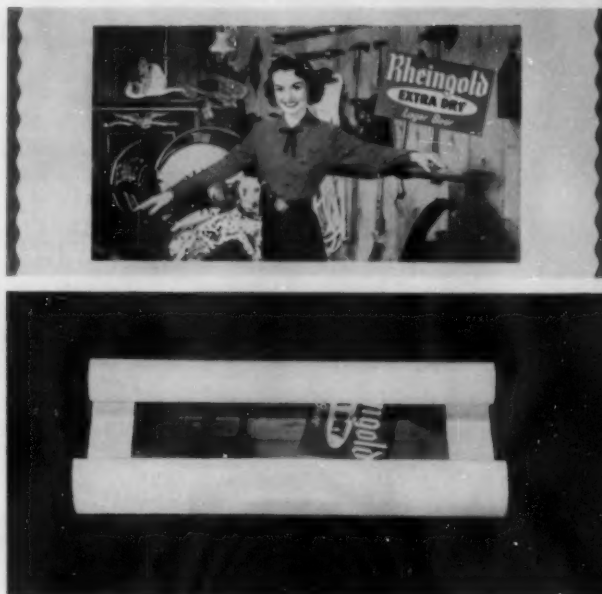
Introduced for the "spring cleaning" season, the display illustrates the Royledge name and crown trademark in a rectangle above the "shelves," topped by a bouquet of spring flowers. The figure, with ruler in hand, and the chair illustration showing a section of shelving and pair of scissors convey the idea that the product is easy to use. Base of the display carries the *Good Housekeeping* seal of approval and sell copy: "High Fashion Styling for Smart Shelves" and "durable—wipes clean with damp cloth."

Credit: Display by Consolidated Lithographing Corp., Carle Place P. O., Long Island, N. Y.

Flexible wall panels

A full-color-lithographed press sheet mounted on single-weight flexible corrugated is an interesting new easy-to-ship display material. One of the first to adopt this new medium is the Leibmann Breweries, Inc., which is using it for a lively wall hanger to promote Rheingold Extra Dry Lager Beer. Advantages of this new material are its economy and its durability. It reportedly has a much fresher look on a wall than the customary wall panel mounted on heavy board, either framed or unframed. The sheet, because of its characteristic flexibility, can be rolled for easy shipment, as shown in the accompanying illustration. Design of the Rheingold display carries out a nostalgic firehouse theme. The background is decorated with fireman's hat, fire hose, axes and other fire-fighting paraphernalia. Dominating the scene is an illustration of an attractive model with a Dalmatian resting on her lap and the Rheingold logotype.

Credits: "Corrobuff" corrugated by Gibraltar Corrugated Paper Co., Inc., Display Div., Tonnetle Ave., North Bergen, N. J. Press sheet by Einson-Freeman Co., Inc., Starr & Borden Aves., Long Island City, N. Y.



Display Gallery

Heat motor animates Stripe display

Animation in this three-dimensional, vacuum-formed display for Lever Bros.' new "Stripe" tooth paste (see "Striped Tooth Paste," MODERN PACKAGING, Jan., 1957, p. 206) gives the illusion of the paste being extruded continually from the tube. In store windows or on store counters, it is an attention getter for this new product.

The entire unit is formed of 20-gauge styrene except for its intricate paperboard construction in back which houses the mechanism for its animation. The plastic is silk screened in five colors before being formed to dimension. The paperboard housing in back has a flasher light built in behind the illustration of the collapsible tube. A heat motor that gives off continuous light in back of the illustration of the stream of tooth paste creates the effect of the paste continually flowing. Size of the unit is 22 by 26 in.

Oval patches on the face of the display give the prices of the two sizes of product: "Giant 53¢" and "Economy 69¢." Face of the unit also carries sell copy.

Credit: Display by Chanal Plastics Corp., 63-20 Austin St., Rego Park 74, N. Y.



Saving with corrugated

Pettibone Mulliken Corp. finds strapped cartons adequate for heavy-equipment replacement parts ranging from ounces to tons, with 30 to 50% economies and improved merchandising



Faster packaging at lower cost results from switching from wirebound crates to corrugated boxes to package replacement parts for heavy construction equipment made by Pettibone Mulliken. Most cartons are bound with metal straps, which user can easily open.

A 30% saving in combined packaging-materials and labor costs and an additional 50% saving in packaging-materials storage space are among the results reported by the Pettibone Mulliken Corp., Chicago, in switching from wirebound crates to metal-strapped corrugated boxes for shipping heavy-equipment replacement parts.

The company and its subsidiaries, leading manufacturers of construction and materials-handling equipment, stock about 30,000 parts to keep graders, loaders, tractor shovels, crushers, etc., operating in the field. Formerly, most of these parts were shipped in wirebound crates, which often were exposed to rain and snow which caused occasional rejects due to rusting.

Replacement parts range from cotter keys weighing a fraction of an ounce to buckets of several tons. The average order going through Pettibone Mulliken's spare-parts department includes several

Orders are checked immediately before packaging to insure items are correct. Note two cartons awaiting strapping. Easily identifiable Pettibone logotype is printed on the bottom as well as on the top of the telescope box.



different parts, the total weight of which comes to about 200 lbs. Rarely are two orders exactly the same, though almost all of them are of high valuation. A single clutch may sell for \$350.

The spare-parts operation currently is being re-planned and the first change that was made came in packaging. The company eliminated wirebound crates and is using seven sizes of multiple-thickness, high-test corrugated boxes that are closed with steel straps.

After a replacement order has been picked from scores of rows of storage bins, it is moved to the packaging area where it is packed in excelsior, which serves as a cushioning material to protect the parts during shipment.

The smaller-size boxes have completely overlapping tops and bottoms and are 275-lb. test. The larger sizes, 350-lb. test, are a full carton with telescoping top and bottom pieces. Though normally up to 350 lbs. of products go into the largest box, the company has successfully packed in this carton twenty-four 18-lb. bucket points that weigh a total of 432 pounds.

The results of this conversion program have been outstanding for Pettibone Mulliken. In addition to the 30% saving in packaging materials and labor costs and the 50% saving in carton storage area, other economies have been effected.

Set-up time for the corrugated boxes is three to four times faster than is possible with wirebound crates. Greater employee safety and some reduction in lost time for minor accidents has resulted from

lack of splinters and sharp edges. Shipping time is faster because of these packaging savings.

There have been many advantages with the corrugated boxes for Pettibone Mulliken customers.

The cartons are quickly opened by snipping the two steel straps. Telescopic containers can be easily closed and re-opened until all contents are emptied from the box. Improved protection of contents is achieved since corrugated solid walls, though not waterproof, do resist snow and rain better than wirebound crates. The old crates often allowed moisture to soak into the excelsior and rust the parts; not one instance of rusting has been reported with the new corrugated containers.

Clear company identification is achieved by a yellow-and-black Pettibone logotype, which was non-existent on the crates. The larger telescope cartons carry the logo on both top and bottom. There is brand identity no matter how the box is turned. The neat appearance of the boxes also is reported to have met with favorable reaction in the field.

At the present time about 80% of the replacement parts are shipped in corrugated boxes. Pettibone Mulliken uses no packaging for such heavy and bulky items as buckets; it uses steel strapping and burlap for cylinders and shafts.

Credits: Corrugated cartons by Stone Container Corp., 4200 W. 42 Pl., Chicago 32. Strapping by Acme Steel Products Div., Acme Steel Co., 135 St. & Perry Ave., Chicago 27. Excelsior by American Excelsior Corp., 1000 N. Halsted St., Chicago 22.



Packaging line, with no two orders alike, operates faster because the corrugated boxes can be set up three to four times faster than the wirebound crates formerly used. All packaging materials can be kept close at hand and require 50% less storage space than former materials.



Telescope carton is partially assembled with bottom and inner liner in position before excelsior cushioning and replacement parts are put inside, the top put on and the carton bound with steel straps. Not one reject due to rusting has been reported since introduction of new boxes.

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Needed Fitments

O-I specialists are keenly aware of sales benefits derived from plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.



Merchandising Cartons

Modern cartons are developed only through systematic consideration of their opportunity to serve you in the retail warehouse . . . as well as on your own filling line and in transit.



Your brand name
can appear right on
top of your product.



Added eye-appeal is the big advantage of O-I's new closure.

A first anywhere— Two-color molded closures!


Here's the most welcome packaging development in decades: molded plastic closures in virtually any two colors you choose!

The new closure gives your package extra color where it needs it most! A color bonus that does much to enhance your product's appearance—to add eye-appeal and buy-appeal right at the point of sale.

And color's not all! With the new closure, you can also give your product greater attention value by ac-

centuating your brand name in sharp two-color relief right on top of your product. And as for utility—you can use a dark-colored closure with a bright spot on top providing salesclerks with an ideal space for faster, easier price marking!

The new closure is another first by O-I... your marketing-minded source for complete glass packaging, with an accent on the right closure and liner. For information, call our local branch office, today.

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Olive oil's case

Packaging, shipping, damage and distribution costs go down when Berolio breaks with tradition by putting gallon cans in unitized cartons for importation from Italy

Why pack canned olive oil in heavy wooden crates when canned tomatoes make the trip from Italy to this country safely and economically in corrugated cartons? This anomaly in its operation piqued the curiosity of the Berolio Import Co., Boston and New York, and sparked what is said to be an innovation in import packaging.

When "tradition" proved the wooden shipping crate's sole support, the company switched to multi-unit corrugated cartons that have cut packaging and shipping costs, reduced damage in transit and simplified distribution and merchandising. These are typical results of packaging heavy or hard goods in corrugated instead of in traditional wooden crates or kegs, and they point up the importance of checking packages periodically against current requirements and developments.



Split-unit package protects cans in transit from Italy and eliminates repackaging in smaller lots for distribution in this country.



Decorated in the modern way, corrugated shipping carton for six 1-gal. cans costs less, travels cheaper and is easier to handle and to open than is the traditional heavy wooden crate.

In the packing plant at Lucca, Italy, wooden crates assembled by a line of carpenters using hand tools seldom met the needs of the single loading line. Yet, warehouse space was too valuable to waste on boxed air. The large crates holding a dozen 1-gal. cans received rough handling in shipment and often failed to protect their contents. Merchandising 1-gal. cans by the dozen was not always feasible and opening the crate was difficult, even with a hammer and chisel.

Multi-unit corrugated cartons solved all of these problems. Shipped flat from the U.S., they take little space in the packing plant. Five six-can cartons can be set up in the time required to assemble one 12-can crate and loading is now a multi-line operation.

Capacity of the shipping container was reduced from 12 to six cans to facilitate handling and distribution. Incorporation of two inner cartons holding three cans each provides added protection and permits gallon cans to be merchandised in units of either three or six without the need for any additional repackaging.

Two shippers and four inner cartons cost 36% less than a wooden crate holding the same number of cans. Lighter containers have reduced shipping costs and the company finds that dock and store workers handle the six-can cartons more carefully than the crates, which were twice as large and more than twice as heavy. Cans are said to sustain fewer dents and ruptures when shipped in shock-absorbent corrugated cartons.

As a final, timely touch, reproductions of the decorative lithographed can design are printed on side panels of the new shipper for identification, label continuity and the free advertising it provides.

Credit: Corrugated containers by Container Corp. of America, 38 S. Dearborn St., Chicago 3.

another
family of
prestige
products
packaged
by BURT



Folding cartons
manufactured
for Revlon, Inc.
New York

Self-selling thermoform

Burroughs Wellcome finds clever way to merchandise an over-the-counter drug item in a formed vinyl plastic unit that gives impulse appeal by colorful display



36 cavities hold vials securely yet permit easy removal by customer. Arrangement provides display of trade name on each package, an effect sometimes difficult to achieve with small containers.

New display potentials of thermoformed plastics to give impulse appeal to numerous over-the-counter drugs are suggested by the compact counter unit currently being introduced for "Marezine," a motion-sickness remedy manufactured by Burroughs Wellcome & Co., Tuckahoe, N. Y.

The easled unit, which was designed by the company, holds 36 vials of the product ready for self selection in individually formed cavities of the vinyl plastic.

The laminated thermoformed section is comprised of opaque vinyl sheet lithographed in three colors combined with clear vinyl sheet over the printing. It is glue mounted to a paperboard backing card to which the die-cut paperboard easel is attached.

The company points out the following advantages over previous packaging used for "Marezine" in dozen units.

The thermoformed unit enables dealers to display three dozen packages on what virtually amounts to an easled counter-display card that attracts immediate attention by its colorful aquamarine background and selling message printed in red, black and green on a white background. It displays the product name prominently on the horizontal label of each package, which formerly did not show when the vials were placed upright in display cartons. It is economical, the company says, in that the new plastic unit of 36 actually costs less than packaging three dozens in separate paperboard packages. And it encourages the dealer to buy a larger quantity to obtain the three-dozen plastic display.

A special detail of the development was the careful engineering required to establish a precision tolerance between the size of the cavities and the slight dimensional variations in the size of the glass vials so that each snaps tightly into place, yet may be removed easily by the customer.

The entire unit containing the 36 packages is shipped in a paperboard carton with protective corrugated insert.

Credit: Thermoformed display manufactured by The Emeloid Co., Inc., 1239 Central Ave., Hillside 5, N.J.



*How 3 different types of
packaging made of
BAKELITE Brand Plastics
create*

Advantages that click with customers



With customers of Stanley hardware items, the advantages of skin packaging in KRENE Cast Vinyl Film have scored a big success. There are 58 items so packaged . . . all store-tested for quick sales. The skin package protects each with a sparkling "stay clear" seal. Screws or fasteners don't get lost. There's no "fog up" or cracking. Stock is kept factory fresh, free from tarnish. Items take up minimum space . . . a small flat package for easy binning. And the brilliant clarity of KRENE Cast Vinyl Film enhances the color-printed card for maximum impulse buy appeal.

(continued)



Advantages that click with customers *(continued from preceding page)*



Polyethylene-coated paper keeps dry milk dry

This bag's inner coating of polyethylene works two ways to protect the contents. First, it keeps moisture and moisture vapor from getting through. Second, it forms a quick, tight heat-seal despite the powdery, dusty contents.

Many different types and weights of paper—as well as films and foils—are now being coated with BAKELITE Brand Polyethylene to obtain these advantages. In addition, highly inert BAKELITE Polyethylene resists the action of most chemicals, including oils, greases, and most acids. And it stays flexible at temperatures below freezing.

BAKELITE Resins serve the food packaging industry in many ways. Vinyl coatings are applied to milk containers. Polyethylene is used on ice cream, soup, and other containers, and as a wax additive on paper. Much equipment for food processing and packaging is also coated with BAKELITE Resins, compounded to meet the particular requirements of this field.

Paper coated with a special compound based on BAKELITE Polyethylene by Crown Zellerbach Corp., San Francisco, Calif., and fabricated into bags by Richmond Paper Co., Highland, Calif., is used to package non-fat dry milk solids by Challenge Cream and Butter Association, Los Angeles, Calif.



Developed by Lumelite Corp., Pawling, N. Y., this new non-shattering dropper features safety as well as precision. Since the tip remains flexible even at refrigerator temperatures it is very safe to use as an eye or nose dropper.



To form a primary seal closure that screws firmly on the bottle, other parts of the assembly are molded of translucent BAKELITE Polyethylene—soft, warm to the touch, and made attractive by a variety of molded-in colors.

New, unbreakable all-plastic medicine dropper controls the size of droplets

By using BAKELITE Brand Polyethylene to make the flexible pipette, the size of the aperture is closely controlled. In addition, a polyethylene diaphragm (instead of a squeeze bulb) on top of the bottle cap responds to easy finger pressure, releasing uniform droplets at the tip, with negligible variation.

Polyethylene's resistance to most chemicals makes it ideal for dispensing drugs, pharmaceuticals, or laboratory chemicals without danger of either contamination or breakage.

Look into all the types of packaging based on BAKELITE Brand Plastics. You can find many profitable ways to develop packaging for your own products that will click with customers. For a copy of our free "1957 Packaging Guide," write Dept. YF-105.

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*You're always ahead with Alcoa
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Labels by Fraser, Milprint, Allegheny, Louis DeJonge and U.S. Printing and Litho.

Tennis balls by the dozen

Wilson's new carry carton stimulates bigger unit sales, offers consumer convenience and represents labor savings on the production line



Square shape, holding four vacuum-packed cans, is convenient to carry and space saving for mass display, thereby promoting "take withs" of impulse purchases. And it's handy for re-use to carry balls or other tennis accessories.

Old package took up valuable counter space, did nothing to stimulate purchase of more than one can at a time.

There's no limit, apparently, to the possibilities of the multipack. The latest example pops up in the athletic-equipment field, where a carry carton for four vacuum-packed cans of tennis balls currently is being introduced by Wilson Sporting Goods Co., Chicago.

The specially designed new carton, the Wilson 12-Pak, holding four cans of three balls each seeks (1) to encourage sale of a dozen balls at one clip, (2) to stimulate mass display and (3) because of the convenient handle, to encourage "take withs."

Cans of Wilson tennis balls were formerly packaged in conventional counter cartons with riser piece. While these got the cans out on the counter all right, they did not particularly promote the purchase of more than one can at a time.

As Wilson began studying possibilities to help dealers increase unit sales, the idea of a carry carton was suggested to Wilson by an avid tennis enthusiast on the staff of the carton supplier. Such a package, it was reasoned, would be convenient to take tennis balls to and from the court and could even be re-used to carry a sweater, eye shade or other tennis-playing accessories.

As the idea progressed, Wilson decided on a square carton—a shape that is easy to carry and space-saving for the dealer to display.

In addition to the new square shape, other features also were incorporated that provide advantages to Wilson. The new square carton saves board in comparison with the former display carton. Its automatic bottom construction speeds assembly on the production line, thereby reflecting a substantial saving in packaging labor costs.

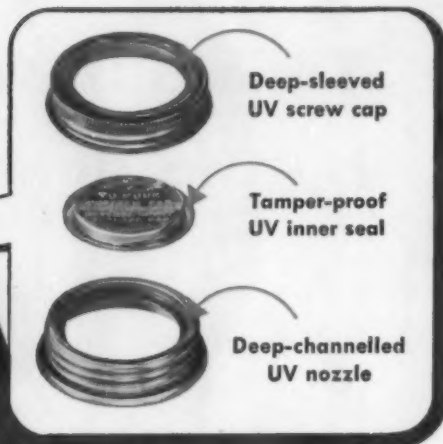
A novel feature, too, is the arrangement of flaps to permit instant opening by a sharp tap where designated, eliminating the struggle with the usual locked tuck flaps.

The carton is made of sturdy, white-surfaced kraft board, printed in three colors—red, yellow and black plus varnish—a miniature billboard for Wilson wherever it goes.

Introduced at the beginning of the 1957 tennis season, the package was designed exclusively for Wilson in the athletic-goods field.

Credits: Carry carton designed and manufactured by The Nevins Co., Clifton, N. J. Cans by American Can Co., 100 Park Ave., New York 17.

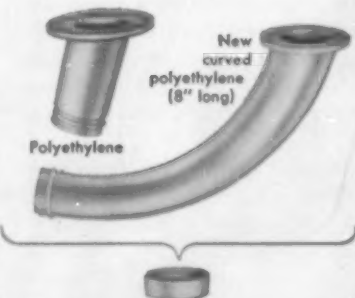
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Saran-coated films

Studies show how addition of as little as 0.1 mil of saran

By M. E. Kelly, Jr.,

to base films of cellophane, polyethylene and polyester can produce

S. F. Roth

dramatic improvement in many packaging qualities

*and H. R. Bailey**

One of the most significant developments in transparent flexible packaging in recent years has been the combining of two or more materials, by either coating or lamination, to obtain a desired set of properties. Polyethylene-coated cellophane, saran-coated cellophane and polyethylene-coated polyester film are examples of combinations which have achieved commercial significance. With the large number of excellent films available today and with variation of the gauges of the laminate or coating members, the combinations of properties available become practically limitless. This is true even without considering the many non-transparent laminates with paper and foil.

Three methods are employed to combine transparent materials:

1. *Lamination.* Two or more integral films are laminated together with or without an adhesive.
2. *Melt extrusion coating.* One film is extruded directly as a coating onto the web of another.
3. *Solvent or dispersion coating.* One material is deposited from solution or dispersion as a coating onto the film of another.

The solution or dispersion coating method offers certain advantages over the other two since it allows extremely thin films of one of the components to be used. Many desirable properties such as heat sealability, gloss, slip, abrasion resistance, printability, barrier properties and resistance to packaged products require only thin layers. The base film need only contribute strength and the desired degree of flexibility. By using an inexpensive base, one can

produce a low-cost, tailor-made packaging film simply by applying a veneer of the desired functional properties. Other advantages of the coating method are:

1. Ease of formulating coatings to obtain specific functional, appearance or handling properties.
2. Speed and low cost of the coating operation.
3. Adaptability of lacquer coating to equipment presently used by the film converting industry.

Coating materials which are finding an important place in this packaging development include soluble saran lacquer resins. These saran resins are vinylidene chloride copolymers which can be deposited

Oxygen transmission vs. coating thickness of Saran Resin F120-coated polyethylene

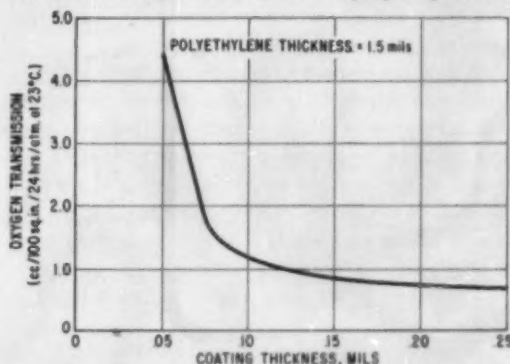


Figure 1. Continuous saran coatings are achieved at about 0.1 mil and little additional effect on gas transmission is observed beyond that.

* The authors are with the Dow Chemical Co., Midland, Mich.

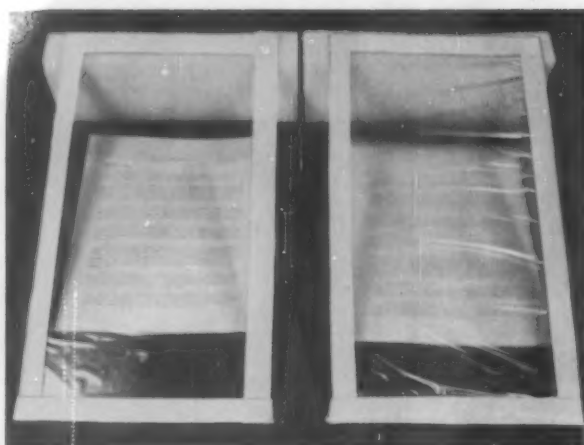


Figure 2. Demonstrating the striking improvement in clarity resulting from a 0.1-mil coating of saran on 1.5-mil polyethylene film. Coated film is on the left; uncoated film, on right.

from solution to yield clear, sparkling films possessing the functional properties which have made the name saran synonymous with protection. The water-vapor transmission rates and gas transmission rates of these films are the lowest of any solvent- or dispersion-deposited films available today. Resistance to oils, greases, acids, bases and many organic liquids and vapors is also outstanding. In addition, saran coatings are abrasion resistant, heat sealable, easily printable, colorless, odorless and non-toxic, and tack free.

Three soluble saran resins have been developed, which differ in barrier and solubility properties.

Saran Resin F120 is an all-purpose flexible resin soluble in higher ketones and esters, and possesses the excellent resistances previously mentioned.

Saran Resin F242 provides even greater barrier properties, but is limited in its utility because of less flexibility and a requirement for more powerful (expensive) solvents or hot-solvent systems.

A new low-viscosity resin, Saran Resin F220, is similar to Saran Resin F120 in barrier properties, but is completely soluble in acetone. This new product provides improved economical processing because of the low cost and relative ease of removal of acetone during the coating operation. Its low viscosity allows high-solids solutions to be employed, which results in additional savings.

Properties of the three saran resins are listed in Table I.

While the utility of most flexible films can be increased with saran coatings, three films in particular are well suited as bases: cellophane, polyethylene and polyester. Cellophane and polyethylene are pre-

Table I: General properties of saran lacquer resins

	Saran Resin F120	Saran Resin F220	Saran Resin F242
Composition	Vinylidene chloride-acrylonitrile copolymers		
Form	White, free-flowing powders		
Specific gravity	1.60	1.60	1.69
Area factor (sq. in./lb./0.1 mil)	173,000	173,000	165,000
Viscosity, approximate, cps. @ 25°C.			
20% in acetone	insol	60	insol
20% in MEK	200	80	45*
WVTR (gm./100 sq. in./24 hrs., 1-mil film, 100°F., 95% R. H.)	0.25	0.23	0.08
Oxygen transmission (cc./100 sq. in./24 hrs., 1 atm. press. diff., 1-mil film)	0.1	0.1	0.1
Grease and oil resistance	Excellent	Excellent	Excellent
Chemical resistance	"	"	"
Heat-seal range, °F.	300-350	300-350	225-350

* 20% in tetrahydrofuran (insol in MEK).

Table II: Gas and moisture permeability of saran-coated polyethylene

	Uncoated polyethylene ¹	Saran-coated polyethylene ²
WVTR (gm./100 sq. in./24 hrs.)	0.82	0.79
Gas transmission (cc./100 sq. in./24 hrs., one atm. pressure difference)		
Air	150.00	0.60
O ₂	340.00	1.30
N ₂	140.00	3.00
CO ₂	900.00	27.00

¹ 1.5 mil film.
² 1.5 mil film with 0.1 mil Saran Resin F120, one side. All films run with coated side next to gas and away from moisture. Gases at 0% R. H., 75°F. WVTR at 100°F., 90% R. H.

ferred, principally because of low cost, while polyester film offers outstanding strength properties. Each of these films in itself is an outstanding packaging material, yet all three have limitations which retard their utility. In many cases these limitations can be reduced or eliminated with a saran coating. The superior properties of saran-coated polyethylene, saran-coated cellophane and saran-coated polyester will be discussed individually in this report.

The application of saran to plastic webs can be performed by any of the coating methods used by film converters. Dip coating, reverse roll coating and rotogravure printing are all used successfully. Optimum saran coating thicknesses are in the neighborhood of 0.1 mil (1/10,000 of an inch).

Each base film presents its own special coating problems. Polyethylene, for example, must be surface treated for satisfactory coating adhesion and cellophane must be rehumidified because the drying step in the coating operation will remove necessary moisture. This paper, however, will acquaint the reader with the *properties* of saran-coated films rather than the techniques of producing them. It also will present properties data on polyethylene bottles and on polyethylene tubes lined inside with saran resins.

Saran-coated polyethylene

In beginning a discussion of saran-coated polyethylene it might be well to summarize some of the properties of the base film itself. A list of the advantages and disadvantages of polyethylene as a food-packaging film might be as follows—realizing, of course, that these qualities will change somewhat from application to application.

Advantages

1. Low cost
2. Toughness
3. Flexibility
4. Low-temperature flexibility
5. Freedom from taste and odor
6. Excellent water resistance
7. Excellent resistance to many chemicals

Disadvantages

1. High gas permeability (O_2 , CO_2 , etc.)
2. Poor grease and oil resistance
3. High permeability to many organic liquids and vapors
4. Poor surface gloss
5. Difficult machine handling due to poor slip and limpness

A glance at the list shows that most of the shortcomings of polyethylene film are those properties in which saran is outstanding and thin saran coatings do, in fact, overcome these shortcomings.

In Table II moisture and gas permeabilities of saran-coated polyethylene are compared with those of uncoated film. The moisture permeability of polyethylene is not greatly affected by coating with saran since the moisture transmission rates of the two materials, mil for mil, are in the same order of magnitude (1.0 gm. versus 0.25 gm./100 sq. in./24 hrs./mil). Thus, the 1.5-mil polyethylene is the rate controlling factor rather than the 0.1-mil saran coating.

With gases the story is different. The extremely high gas-permeability rates of polyethylene are reduced with 0.1 mil of saran to levels which make the film an effective gas barrier. Resistance to gases

Table III: Wet and dry gas transmission through saran-coated polyethylene and a cellophane/polyethylene laminate

	Saran-coated polyethylene ¹	Cellophane/PE laminate ²
Air dry (0% R.H.)	0.6	0.1
Air moist (100% R.H.)	0.7	6.0
Oxygen dry (0% R.H.)	1.3	0.15
Oxygen moist (100% R.H.)	1.8	15.0

¹ 1.5 mil polyethylene coated one side with 0.1 mil Saran Resin F120.

² Two mil polyethylene on 300-gauge nitrocellulose-coated cellophane.

Table IV: Oil resistance of saran-coated polyethylene

	No. of days to visible penetration @ 140°F.	
	Uncoated polyethylene ¹	Saran-coated polyethylene ²
Cottonseed oil	3	>30
Cod liver oil	4	>30
Mineral oil	4	4

¹ 1.5 mil polyethylene film.

² 1.5 mil PE coated one side with 0.1 mil Saran Resin F120, oils on uncoated side.

Table V: Organic vapor transmission rates of saran-coated polyethylene

	Vapor transmissions (gms./100 sq. in./24 hrs. @ 75°F.)	
	Uncoated polyethylene ¹	Saran-coated polyethylene ²
Ethanol vapor	0.67	0.09
Eucalyptol vapor	1.41	0.07
Lemon oil vapor	3.14	0.78
Chloroform vapor	3.51	0.08

¹ 1.5 mil polyethylene film.

² 1.5 mil polyethylene coated one side with 0.1 mil Saran Resin F120, coating away from vapor.

is necessary for such applications as packaging of processed meats and cheeses in either a vacuum or inert gases. Elimination of oxygen retards rancidity and discoloration in packages containing fats, oils, dried whole milk and many other products.

The effect of coating thickness on gas permeability is shown in Figure 1. This graph shows that continuous saran coatings are achieved between 0.1 to 0.2 mils and that little additional benefit is achieved by thicker coatings.

The barrier properties of many packaging films, particularly those hydrophilic in nature, are ad-

Table VI: Physical properties of Saran Resin F120-coated PE film

	Polyethylene 1.5 mil	1.5 polyethylene coated one side with 0.1 mil Saran Resin F120
Ultimate tensile strength (psi) machine direction	3,100	3,200
Ultimate tensile strength (psi) cross-machine	3,000	2,700
% elongation—machine direction	360	360
% elongation—cross-machine	650	610
Tensile modulus—machine direction	21,000	21,000
Tensile modulus—cross-machine	26,000	25,000

Table VII: 33-day weight change at 75°F. of various permeants through 4-oz. round polyethylene bottles, uncoated and coated with 0.6 mils Saran Resin F-120

Permeant	Weight change in grams through: Uncoated bottles Coated bottles	
Water*	-0.51	-0.53
Ethyl alcohol	-0.16	+0.03
Lemon oil c.p. (20% in alcohol)	-6.41	-0.31
Eucalyptol c.p. (20% in alcohol)	-0.41	+0.02
p-Cymene (20% in alcohol)	-3.14	-0.40
Chloroform (20% in alcohol)	-1.79	-0.06
Proprietary cologne	-0.27	+0.02
Proprietary cough syrup	-0.15	0.00
Proprietary hair dressing	-0.12	+0.01
Proprietary nose drops	-0.04	+0.02

* At 130°F.

versely affected by high humidity. Since neither polyethylene nor saran is moisture sensitive, saran-coated polyethylene film is completely unaffected by high humidity. Table III compares the dry and moist gas transmissions of saran-coated polyethylene with a commercial cellophane/polyethylene laminate. As long as the laminate is dry, the cellophane affords excellent gas resistance, but when moist gases are encountered, it is no longer effective.

The poor oil resistance of polyethylene is another of its limiting properties. Table IV shows the improvement achieved with a thin saran coating. These data were obtained by packaging weighed amounts of sand saturated with one each of a dyed animal,

Table VIII: WVTR of saran-coated cellophane

	WVTR (gm./100 sq. in./24 hrs. @ 100°F., 90% R.H.)
300-gauge uncoated cellophane	Very high
300-gauge nitrocellulose-coated cellophane	2.25
Saran Resin F120-coated cellophane*	1.19
Saran Resin F242-coated cellophane*	0.28

* 0.1 mil saran per side of 300-gauge uncoated cellophane.

Table IX: Gas transmission of saran-coated cellophane

	Gas transmission—cc./24 hrs. 100 sq. in., one atmosphere pressure difference			
	Dry air ¹	Wet air ²	Dry O ₂	Dry CO ₂
Nitrocellulose-coated cellophane (1 mil)	<0.03	25.0	0.03	0.25
Saran-coated cellophane*	<0.03	<0.03	0.03	0.51

* 0.1 mil Saran Resin F242 per side on one mil PT cellophane.

¹ 0% R. H.² 100% R. H. following 1 hr. water immersion.

vegetable and mineral oil in a pouch. The time required for the dyed oil to permeate through the package and stain a piece of blotting paper under the package was observed. This was an accelerated test run at 140 deg. F. The results show saran-coated polyethylene to be much superior in resistance to animal and vegetable oils. Because of this extra resistance, lard, shortening, butter, bakery products, processed and frozen meats, fish and other oily foods would have extended shelf life when packaged in this film.

High permeability to many organic liquids and vapors is another limiting property of polyethylene. The improvement in this property due to a thin saran coating is shown in Table V. This table lists the permeabilities of four common pharmaceutical ingredients determined in Thwing-Albert Vapometer Cups at 75 deg. F. The added shelf stability of products containing these ingredients packaged in saran-coated polyethylene should be obvious. Vapor transfer works both ways, of course, and in addition to maintaining taste and odor of packaged products, saran-coated polyethylene prevents contamination of the packaged products from foreign tastes and odors permeating from the outside of the package.

Because of the thinness of the coating, the strength and flexibility properties of saran-coated polyethylene are approximately the same as those of

the base film itself. Table VI lists many of the physical properties of saran-coated and uncoated 1.5 mil polyethylene film.

The authors could find no good quantitative tests for low-temperature flexibility, but handling of saran-coated and uncoated polyethylene film at freezer temperatures (20 deg. F. below zero) showed no differences.

Little experience has been gained, as yet, on the printability of saran-coated polyethylene. However, printing inks have been developed which are believed to be suitable for this purpose. When the saran coatings are applied by the converter, the base polyethylene can be printed prior to coating and the saran doubles as an overprint lacquer. None of the functional advantages is lost by coating saran over printing.

The application of a saran coating to polyethylene film has a striking improvement on its clarity. Figure 2 demonstrates this.

In addition, the excellent surface gloss of the saran is imparted to polyethylene and the combined effect is a film approaching saran film itself in clarity and sparkle. The added sales appeal of this film over polyethylene is an important factor not only in food packaging, but for soft goods, hardware, toys, housewares and many other commodities.

Both standard and stiffer high-density polyethylene will soon be available in saran-coated form.

Heat sealability of saran to saran or saran to polyethylene with saran-coated film is poor. The adhesion between the coating and the base film is sufficient to withstand normal handling without delamination, but is not strong enough to withstand the extreme tensile stress placed on a heat-sealed seam. At the present stage of development, a preferred method of packaging will be in bags formed from tubing which has been saran coated on the outer surface. This method will allow polyethylene-to-polyethylene seals to be made on ordinary polyethylene sealing equipment by the conventional lip or fin seals. For overwrapping with one-side-coated film, the fin seal, the butt seal and the folded-over center seal can be used. These are the techniques employed with polyethylene-cellophane laminates. A great deal of effort is being put into improving the adhesion of saran coatings to polyethylene for heat sealability and it is anticipated that some manufacturers will soon have two-side-coated film heat sealable by any technique.

Saran-coated polyethylene tubes and bottles

Of interest to packagers, and closely related to saran-coated polyethylene film, is the use of saran resins as linings for polyethylene bottles and collapsible tubes. As with coated film, the improve-

Polyethylene film, bottles, tubes	Polyester	Cellophane	Cellulose acetate	Improvements obtained with saran coatings
	✓	✓	✓	Reduced WVTR
✓	✓	✓	✓	Reduced gas permeability
✓	✓	✓	✓	Improved flavor retention
✓	✓	✓	✓	Improved oil grease resistance
✓		✓		Improved abrasion resistance
	✓			Provide heat seal
✓				Improved clarity
✓				Improved gloss
	✓		✓	Improved chemical resistance
✓				Improved slip

Figure 3. Check-chart shows at a glance the improvements to be expected in four kinds of film with the addition of a thin saran coating.

ments brought about are in the reduction in permeability to essential oils, greases, acids, bases and organic liquids and vapors. Several of the leading bottle manufacturers are currently doing development work on lined bottles of this type.

Table VII shows the reductions in permeability brought about by the use of a 0.6-mil lining of Saran Resin F120 in filled 4-oz. round polyethylene bottles stored at 75 deg. F. over a 33-day shelf aging period. Once again the water permeation was not affected by the saran coating, but the permeation of all other liquids tested was greatly reduced. The effect of this permeability reduction is to extend greatly the shelf life of packaged products by maintaining the taste and odor, and retarding rancidity and discoloration due to oxidation.

Saran-coated cellophane

Cellophane is by far the largest-selling flexible film in use today. It is estimated that of the 550 million pounds of flexible film sold in 1956 roughly 60%, or 350 million pounds, was cellophane(1).† Among the properties which have made this our most widely used film packaging material are low cost, transparency and ease of handling on high-speed converting and packaging machinery.

Base cellophane itself is a plasticized film of regenerated cellulose, a hydrophilic material. It re-

† Numbers in parentheses identify References appended.

Table X: Oil resistance of saran-coated cellophane*

	Oil transmission—No. of days to visible penetration at 140°F.		
	Cottonseed oil	Mineral oil	Cod liver oil
300-gauge nitrocellulose-coated cellophane	<1 day	3 days	<1 day
Saran Resin F242-coated cellophane*	1 day	>13 days	>13 days

* 0.1 mil Saran Resin F242 on 300-gauge uncoated cellophane, two sides.

Table XI: Moisture, gas and vapor permeability of saran-coated Mylar® polyester film

	Gas transmission ¹			Vapor transmission ²		
	WVTR ³	O ₂	Air	Alcohol	Lemon oil	Eucalyptus oil
Mylar polyester, 50-gauge	2.48	9.7	2.1	0.44	0.44	0.05
Saran Resin F120 ⁴ -coated Mylar	0.78	0.30	0.03	0.18	0.43	0.05
Saran Resin F242 ⁴ -coated Mylar	0.40	—	—	0.09	—	0.09

¹ Du Pont's trade name for its polyester film.

² 0.1 mil coating per side of 50-gauge Mylar.

³ Gms./100 sq. in./24 hrs. @ 100°F., 90% R. H.

⁴ Co./100 sq. in./24 hrs./atmosphere pressure difference.

⁵ Gms./100 sq. in./24 hrs., 75°F.

quires a definite, controlled amount of moisture as a plasticizer and either too much or too little moisture results in a loss of packaging properties. Brittleness results from too little moisture, while weakness, dimensional changes and loss of functional properties result from an excess of moisture. Nitrocellulose coatings retard the inherent hydrophilic nature of this film and also provide functional properties useful in the packaging field. In many instances, however, these protective qualities need improvement to meet the rigorous demands of certain products in today's distribution system. This has led to the development in recent years of saran-coated cellophane as a premium-quality member of the cellophane family.

While saran-coated cellophane is superior to other

Table XII: Oil resistance of saran-coated Mylar polyester film

	Oil transmission—No. of days to visible penetration at 140°F.		
	Cottonseed oil	Mineral oil	Cod liver oil
Mylar polyester	>13 days	<2 days	<2 days
Saran Resin F120-coated Mylar	>13 days	>13 days	>13 days

grades in other respects, the main advantage is a combination of low WVTR and grease resistance. In Table VIII the WVTRs of cellophane coated with two saran resins are compared with nitrocellulose-coated and uncoated cellophane. Of the presently available saran lacquer resins, Saran Resin F242 is preferred because extensibility is not required and it provides superior water resistance.

The excellent moisture protection provided by the saran coating improves cellophane performance by providing greater dimensional stability to the film because of the retarding effect on moisture change.

Also the inherent properties of these resins are such that they provide a better barrier to gases and organic vapors than either the regenerated cellulose base film or its nitrocellulose coating. In Table IX the gas transmissions of a commercial saran-coated and a nitrocellulose-coated cellophane are compared. The latter is actually the better barrier as long as the gases are dry (0% humidity). When the gas is saturated with moisture, as in a refrigerator, however, the transmission rate is increased many fold. The saran coating, on the other hand, protects the cellophane from becoming moistened and the gas transmission is maintained at a low level. This protective value is extremely important when moist foods which require good gas control, such as butter, are packaged.

In Table IX the moist-air values were obtained by immersing the films in water for 1 hr. to simulate the packaging of a wet product. Moist air was then passed through the films and the transmission rate measured.

Protection against "sugaring" in dried fruits and candy is another advantage of saran-coated cellophane related to moisture control. Sugaring is the whitish crystallization of sugar hydrates which appears on the surface of these products when moisture is allowed to permeate the package. Saran-coated cellophane is being widely used in these applications.

Saran-coated cellophane is superior to other grades in a number of respects not associated with moisture control. One of [Continued on page 222]

Testing poly-cello pouches

Investigation in Sweden results in new technique and instrument for evaluating vacuum and liquid-holding packages made of polyethylene-coated cellophane

By I. Olsson
and L. Pihl*

Pouches made of packaging material based on polyethylene laminated to or extrusion coated on cellophane have during recent years been widely used in Sweden for the vacuum packaging of cheese and the packaging of various liquid products. With liquid products, there have been many problems with leakage when the pouches have been transported from the filling plant to retailers and displayed in supermarkets.

In order to decrease leakage and to test the different materials, several investigations have been made. These investigations have been made both in the plants where the pouches are made and in the packagers' plants where they are filled. The material for the pouches has been supplied from manufacturers in the United States, England, Belgium, Italy, Sweden and Germany. The polyethylene on the material was mostly extrusion coated on one-side-lacquered cellophane and the thickness of the material was 0.002-in. polyethylene on 450- and 300-gauge cellophane.

Preliminary

The strength of the pouches was, in preliminary tests, investigated by filling the pouches with water and drop testing. The ratio in length between the sides of the pouches was about two to three. They were made in three sizes and almost filled with 100 cc., 200 cc. and 300 cc. of water. The height of the drop was between 100 and 150 centimeters. The drop test consisted of two different procedures: In one test the pouches were dropped from different heights and in another test one and the same pouch was dropped from the same height and the number of drops before failure determined. Both these tests gave almost the same result. The result showed that a smaller pouch could stand several more drops than a larger pouch, which is easy to understand (see Table I).

However, all these tests showed that the seal was the weakest point of the pouch. The drop tests did not give enough information about the strength of

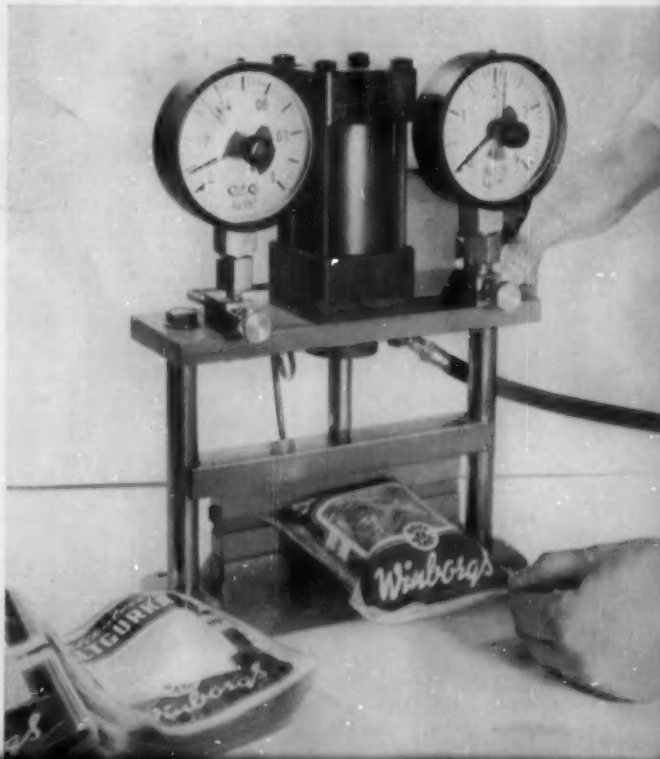
the material itself and they could seldom tell which part of the seal was the weakest. These tests were at the same time too time consuming for continuous control.

Accordingly, an instrument was built in order to break the pouches by compressed air (see Figure 1). It was hoped to be able to test with this instrument the sealing properties of different materials and at the same time control the sealing operation of the pouch-making machines.

Theoretical

If a pouch is inflated with air it tends to reach a cylindrical cross section. If it is regarded as a thin-walled cylinder, there are two different stresses

Figure 1. Instrument has rubber-coated sealing jaws through which compressed air is blown into the pouch to the point of failure. Pressure causing failure is recorded on one of the two manometers.



* The authors are with Research AB, Solna, Sweden.

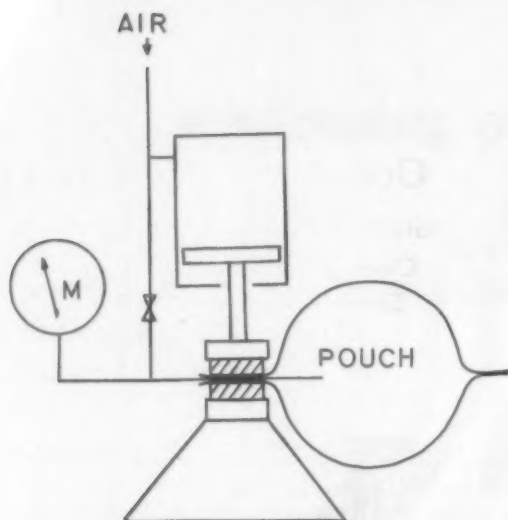


Figure 2. Schematic drawing of the test instrument. Air line enters the pouch through a valve in sealing jaws. "M" represents recording manometer.

acting on the wall—one longitudinal and one tangential. The longitudinal stress does not need to be considered in connection with the tangential stress, as it is rather small.

Table I: Number of drops before failure from a height of 100 cm. with pouches filled with water

No.	Sample	100 cc.		200 cc.		300 cc.	
		Mean value	Median	Mean value	Median	Mean value	Median
1	Belgian 74	5	—	—	—	—	—
2	USA 3200C	14	11	5	5	5	3.5
3	" 4200C	7	6	3	2	3	3
4	" 3200	7	7	3	3	1	1
5	" 4200	12	10	4	4	2	1.5
6	German	11	10	4	3.5	3	1.5
7	Belgian 85	50	50.5	17	15	14	12.5

Table II: Materials tested and test results

No.	Sample	Regenerated cellulose; MSAT-80 type (gauge)	Polyethylene gauge (in.)	Finished film thickness (mm.)	Weight gm./sq. m. ²	S kg./cm. ²	Ks kg./cm. ²	E
1	Belgian 74	300	0.00175	0.075	80	785	270	0.358
2	USA 3200C	300	0.002	0.080	85	915		
3	USA 4200C	450	0.002	0.085	95	1,005	250	0.250
4	USA 3200	300	0.002	0.080	85	980		
5	USA 4200	450	0.002	0.085	100	1,125	340	0.302
6	German	300	0.00125	0.060	70	970		
7	Belgian 85	450	0.002	0.085	95	1,080	353	0.326

If the stress in the material is symbolized S the assumption leads to the relation

$$t = \frac{P \cdot D_m}{2 \cdot S \cdot E} \quad (1)$$

where P is the internal pressure

D_m = mean diameter

t = thickness of material

E = efficiency of welded or other joints.

When S equals the ultimate strength, as determined by the usual tensile test, failure by fracture of the wall of the pouch will occur.

From the formula (1) different factors can be calculated. As a figure on D_m we have used the width of the pouch, which is not absolutely correct as the diameter changes when air fills the pouch and the increased pressure causes an extension of the pouch. The exact formula is $D_m = \frac{2D}{\pi}$, where

D is the width of the pouch, and our approximation of first order is $D_m \approx D$. If the internal pressure P can be determined, the constant of the material S and the factor E can be calculated.

Testing procedure

To be able to determine the factors above, an instrument was designed consisting principally of two parallel rubber-faced jaws which could seal the fourth side of a welded pouch. The jaws are operated by compressed air through a piston. A tongue enters the pouch between the jaws, and through the tongue air is released for inflating the pouch. The amount of air pressure causing failure of the pouch is read on a manometer (M in Figure 2). Separate valves regulate the sealing jaws and the air inflating the pouch. The instrument is equipped with two manometers which can be switched between different intervals of pressure in order to be able to test the strength of material and the seal.

In order to determine the S-value of the material itself, a pouch is made where the longest side is

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Table III: Per cent decrease in strength for pouches filled with water

No.	Sample	24 hrs.	12 days filled with water	
		with H ₂ O, %	Stored	Transported
2	USA 3200C	25	—	—
5	USA 4200	45	54%	76%
7	Belgian	0	—	—

without any weld. The shorter sides are heat sealed. The longest side of the pouch is placed in the instrument parallel to the jaws. From the discussion above it can be explained that the failure will occur anywhere on the longest side of the cylinder and in the unwelded material. In this case the factor E equals one and the ultimate strength S can be calculated from formula

$$S = \frac{P \cdot D_m}{2 \cdot t} \quad (2)$$

In the next test the seal is tested. A pouch is made from the same material, but the welded side is now parallel to the jaws. From the values obtained the factor E can be calculated

$$E = \frac{P \cdot D_m}{2S \cdot t} \quad (3)$$

and if K_s is the strength of the seal K_s = E · S, we obtain

$$K_s = \frac{P \cdot D_m}{2 \cdot t}$$

By this method the sealing properties of different materials as well as their strength can be compared. The sealing operation of the jaws in the pouch-making machines can easily be checked.

Results and comments

In Table II we show some figures on materials tested by this method.

Besides the tests above, the properties of the material may also be tested by a complementary test where the drop in strength of the seal is determined by testing pouches which have been filled with water. The strength of the seal is determined in one series with pouches unfilled and one series with pouches filled with water. After 24 hrs. with water in the pouch, the seal is tested. As a result, we have found that some materials show a drop in strength of 50% or more (see Table III).

This drop may be caused by pinholes in the polyethylene layer from the extrusion or in the seal, permitting water to pass. Such material will soon cause delamination when used for packaging of liquid products. Table III also shows that a decrease in

strength occurs when the pouches are transported and that this decrease can be serious.

In addition to the basic qualities of the polyethylene-cellophane material, the investigation has shown that sealing strength to a high degree is dependent on the kind of sealing equipment used, the shape of the jaws, their temperature, sealing pressure and the period of cooling after sealing.

Some manufacturers use anti-stick powder, such as talcum, in their rolls, which in many cases decreases the sealing strength. Some powders decrease the strength more than others. We have found that it is best for a good seal that no anti-stick agent be used. Silicone release agents may cause disadvantages for other reasons.

In order to test the tendency of the seal to part, the pouches can be kept under constant pressure for some minutes in the instrument. The pressure should be kept as high as possible below the pressure for failure. A bad seal will in this test separate the two polyethylene layers without any break in the polyethylene films. In some cases we have found that too much anti-stick powder will act as a barrier between the polyethylene layers when the material is heat sealed and cause this failure. Oxidation of the polyethylene or an uneven extrusion can cause bad seals of the same kind.

Example

Following is an example of a calculation according to the method described above:

Material: Belgian 85 No. 7.

The unwelded material P = 1.60 kg./cm.²

D_m = 11.5 cm.

t₁ = 0.0085 cm.

$$S = \frac{1.60 \cdot 11.5}{2 \cdot 0.0085} = 1080 \text{ kg./cm.}^2$$

The welded material

P_s = 0.48 kg./cm.²

D_m = 12.5 cm.

t₂ = t₁

$$K_s = \frac{0.48 \cdot 12.5}{2 \cdot 0.0085} = 353 \text{ kg./cm.}^2$$

$$E = \frac{353}{1080} = 0.326$$

After 24 hrs. filled with water, the strength of the pouches is tested again in the same way and the figures compared. Strength should not be allowed to decrease more than 5% of the original strength for a good pouch.

Acknowledgments

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*A look into
your packaging future*



Olin Cellophane Sells New Ideas On Sight

Francis Blod, package designer, says: "Got a new cookie? A new fabric design? A new toy, snack, cup cake, or a new idea for selling meat? The instant ability of transparent cellophane packaging to 'demonstrate' new products makes it one of the best ways to overcome initial buyer resistance and win quick sales success economically.

"Olin Cellophane wins added impulse sales because of its attractive display of both product and label. Its natural sparkle, its assurance of freshness and cleanliness make it a natural choice for tray

or box overwraps. And wherever desired, printed Olin Cellophane provides a package with vibrant, attention-compelling color."

Francis Blod reflects the latest thinking in modern package design. Why not let an Olin consultant help you or your designer package your new products for instant consumer acceptance. Film Division, Olin Mathieson Chemical Corporation, 655 Madison Avenue, New York 21, N. Y.

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This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Poly-coated waxed paper

Q: *We would like to extruder coat polyethylene on a dry waxed paper and obtain good adhesion of the resin. We cannot obtain good adhesion with any grade or weight of wax we have tried thus far. Is there a special grade of polyethylene that would serve this purpose, or any method of coating that would give good adhesion?*

A: There are many problems in obtaining strong adhesion of an extruder coating of polyethylene to some types of paper. Papers that are very dense or that have certain types of surface coatings cannot be coated to obtain a strong bond of resin to paper. Wax coatings or wax on paper fibres prevent the hot polyethylene from entering the paper and bonding to the paper fibres. The wax will melt in contact with the hot resin, but there is not sufficient time for the wax to dissolve into the resin. Thus, on cooling, a weak bond results.

It is suggested that the paper be polyethylene coated before waxing. Thus a strong bond should be easy to obtain. The resin-coated paper, using this method, can then be waxed in any degree on the paper side without affecting the polyethylene-to-paper adhesion.

Machine feeding of films

Q: *One of our machines handles several different types of plastic film in connection with a package-forming operation. It is necessary for this machine to position plastic film precisely and we have considerable difficulty in controlling certain materials. Apparently some plastic films tend to drag on the feed rolls. Static eliminators have not solved the problem. Is there any other step we can take to assist in the feeding of plastic film through this equipment?*

A: Plastic films have different surface slip or frictional characteristics,

depending on the type of resin, the degree of plasticization and the surface finish. In general, a film that is highly plasticized and with a very smooth surface will show greater drag or resistance to slip than a less-plasticized film with a rougher surface. Also some plastic films have been treated with surface slip agents to improve their working properties. Apparently your equipment is quite complex and requires a film with better-than-normal slip.

It is suggested that you try both customary smooth rolls as well as rolls with a roughened surface to see which one gives the maximum benefit. You should also try Teflon or some other type of plastic material as roll covers.

The best answer is probably to redesign your machine to simplify the film feed mechanism. This would appear to be the only way to obtain permanent relief, since you use so many different films.

Protecting granular product

Q: *We package a granular food product containing sugar, acid and flavor concentrate in a folding carton with a dry waxed liner. This package has given us good results near our plant in the Southwest, but our returned goods are very large when we ship into other areas. Can you recommend a better package?*

A: Your product is probably very hygroscopic and becomes unusable with small moisture gains. Also this type of package gives very little moisture protection. If it were not for the general low humidities in the Southwest, you would also have appreciable returns from that area. When you ship your product out of this low-humidity area, the package is insufficient to protect the contents for an extended shelf life.

The simplest means of correcting this is to add a moistureproof overwrap made of waxed paper, cellophane or an aluminum foil-paper

lamination. You could also improve the protective qualities of the package by using a moistureproof type of liner instead of the dry waxed. In this case, you should be sure that your liner is heat sealed or made as mechanically tight as possible.

Humidity in test cabinet

Q: *We have been having difficulties in maintaining uniform humidity in our new laboratory testing cabinet, designed for testing packages of a dry product in a high-humidity atmosphere. It was our thought that we should not use a fan or a blower, but use natural convection for maintenance of temperature and humidity. We have had no difficulty in maintaining uniform temperature by the use of radiant wall heating, but have noticed that the humidity at the top of the cabinet is much higher than at the bottom. How can we keep a uniform humidity in this type of cabinet?*

A: The phenomenon of higher humidity at the top of a closed space is due to the fact that water vapor is lighter than air. This fact has been the cause of poor operation of many package-testing cabinets. Apparently, it is difficult to realize that water vapor is appreciably lighter than dry air at the same temperatures. Water vapor under these conditions behaves as a gas and an index of its density (weight per cu. ft.) is its molecular weight of 18. Similarly, dry air would have a density proportional to its molecular weight of 29. This means that water vapor is two-fifths lighter than dry air and that mixtures of water vapor and air will be increasingly lighter than dry air as the humidity content of the mixture is increased.

Since you have no forced draft in your package-testing cabinet, the natural tendency is for water vapor to rise to the top of the cabinet because both the water vapor and dry air are at the same temperature.



1866

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were sold to a ready market in this country. By the late 60's, however, our still-young but ingenious glass container industry was meeting domestic demands with a superior product at a competitive price...and the practice of carrying "bottles for ballast" became an historic memory.

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Equipment and materials

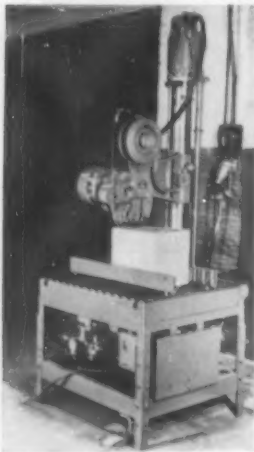
Heat-shrinkable-type polyester

A new type of Mylar polyester film that can be heat shrunk to provide clear, durable, skin-tight wraps for smoked meats and poultry has been announced by E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del. Announcement of this film coincides with the introduction of a new line of Tender Made Slice 'N' Serve hams wrapped in the film by Wilson & Co., Chicago. The new film is reported to retain essential properties of standard Mylar. It comes in cut-to-size or continuous-tubing form, plain or printed. Closure equipment is commercially available and existing equipment can be used with minor modifications to insure airtightness, according to DuPont. Toughness of the film enables products packaged in it to take rugged handling and minimizes the problem of retailer rewapping and spoilage due to film breakage.



New box-stitching method and machinery

Stitches are cut and formed from a continuous coil of wire, driven into both outer and inner flaps of filled fibreboard boxes and clinched inside the inner flap without any mechanism entering the box with a new box-stitching method and a new series of box-stitching machines announced by Acme Steel Co., 135 St. & Perry Ave., Chicago 27. This circulate wire-stitching method eliminates the need for retractable clinching anvils, thereby increasing production speed while reducing chance of product damage. The method is adaptable for simultaneously closing tops and bottoms of filled boxes (regular slotted or overlapping flaps), the sides



and ends of filled five-panel folders and two-piece telescope-type boxes, as well as sides, ends, tops and bottoms of outsized containers. Heart of the new method consists of Acme Steel's new N6 series machines with specially designed formers, shoes and wire arcing mechanisms. Illustrated is the Model N6A17 with top and bottom stitching units, for simultaneous closing of filled boxes with regular slotted or overlapping flaps. Other models are the N6C17, N6BO and N6PO. Up to 700 average-sized boxes can be stitched per hour and approximately 13,000 stitches can be obtained from a 25-lb. coil of flat stitching wire.

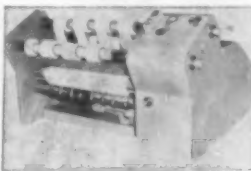
Improved composite container for biscuits

A new composite container for biscuits announced by the American Can Co., 100 Park Ave., New York 17, is reported to have three major improvements over current versions: an adhesive for the pull tab that permits easy opening of the package; outside alumi-

num foil that improves package appearance offers moisture protection and increases product shelf life; a slow-sealing device in the top end seam that allows gas to escape during the 3 to 4 hrs. the biscuits are rising. The pull tab, an overlap extension of the cylinder wall, extends the entire length of the container and allows the package to be opened with a consistent all-around-the-end tear when the flap is pulled back. The container is made of a light fibreboard laminated with aluminum foil on both sides and has metal ends. A heavy wax coating applied to the surface of the inner foil gives added moisture resistance.

Improved new slitting machine

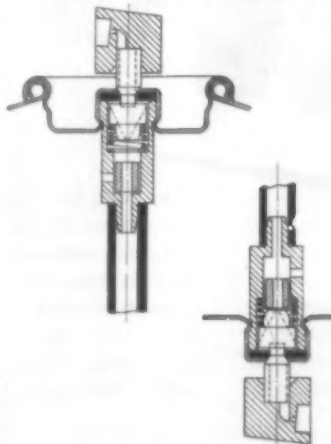
Efficiency and ease of operation is claimed for the new Stanford Slitter Model 310, developed by the Stanford Engineering Co., Salem, Ill. The machine employs a new principle which is said to eliminate friction wind, tension bands, heat sealing at cores, uneven tensions on finished rolls and core crushing. It also obviates the necessity of edge trimming and stops the waste of rejected rolls resulting from poor tensioning. The unit is reported to assure positive tension to each winding roll. There are no clutches to heat or cores to slip. It maintains a constant web speed up to 1,000 ft. per minute (3,000 optional). Instant convertibility from score or shear cut to razor-blade slitting is claimed, and knives and point of slitting are completely visible from unwind to rewind. The machine is complete with automatic web guide and constant-tension controls.



New aerosol valve

Aerosol dispensers may be sprayed in either an upright or an inverted position with a new valve developed by the Gulf Research & Development Co., subsidiary of Gulf Oil Corp., P. O. Drawer 2038, Pittsburgh 30, Pa.

The new design permits users, without adjusting the valve, to select either a dry or wet spray simply by holding the dispenser upright or inverted. Valves may also be designed to give only a dry or only a wet spray in both positions. One example



of the new design, illustrated in the accompanying sketch, uses a gravity slide or other device to open or

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No other carton offers Cluster-Pak's double protection. You get unequalled strength of famous Mead quality kraft combined with the world's only self-locking construction that needs no glue.

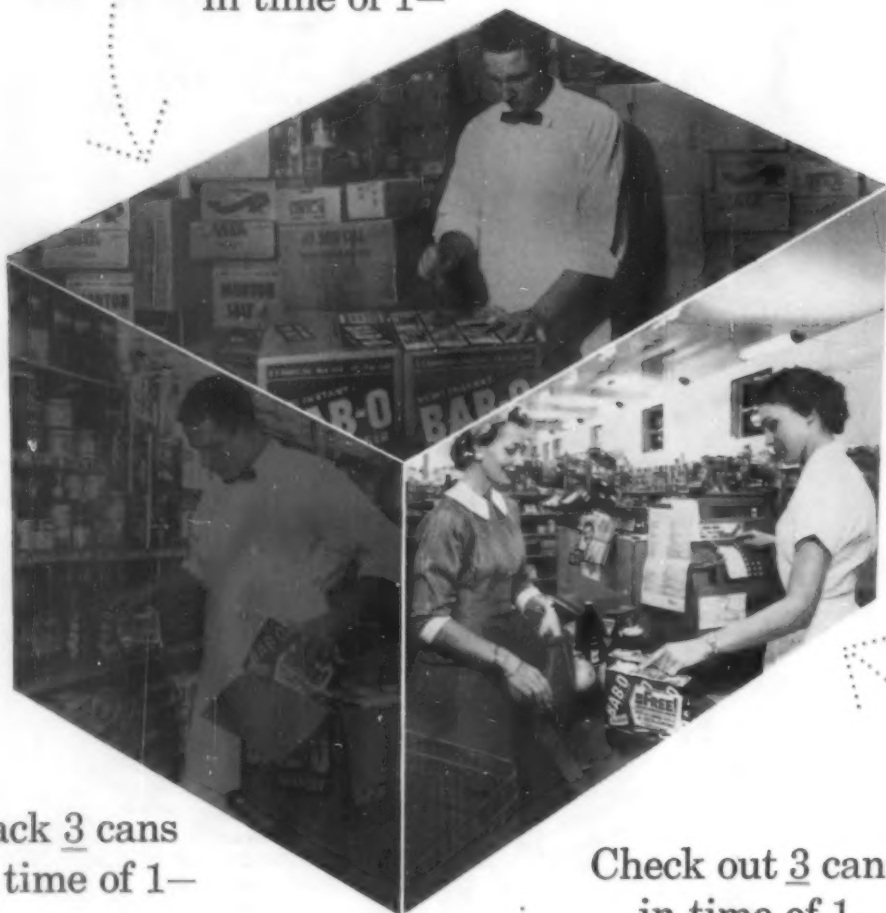
For full details on low-cost market tests, write P. O. Box 4417, Atlanta 2, Georgia.

Two, three, four . . . even *six* cans! In Cluster-Pak multi-unit cartons, they're almost as easy to sell as a single can. *Sometimes even easier!* For Cluster-Paks, with their greater display area and greater "grab-appeal", actually *trigger* impulse purchases. And, because they make it convenient for housewives to buy ahead, they fit into today's trend to less frequent shopping. For quicker, bigger sales—put your products in Cluster-Pak.

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Price 3 cans
in time of 1—



Stack 3 cans
in time of 1—

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Retailers save time 3 ways with **CLUSTER-PAK[®]**



Since Cluster-Paks save you time, *they save you money on high labor costs, as well.* What's more, Cluster-Paks won't break, cans won't spill, customers won't become irritated. Because Cluster-Paks offer the unequalled strength of Mead quality kraft combined with world's only self-locking construction that needs no glue. Good reason to favor products in Cluster-Paks!

For full list of products available in time-saving, money-saving, trouble-free Cluster-Paks, write Box 4417, Atlanta 2, Georgia.

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Equipment and materials

[Continued from page 164]

close an orifice in the valve body, depending upon the position of the dispenser. When upright (left in illustration), the orifice is closed, preventing loss of gas. When inverted, the orifice is open and liquid contents are discharged by passing directly into the valve body. The new valve, which will be licensed to valve manufacturers under Gulf's patents, can be incorporated into existing valve designs and is inexpensive, according to the manufacturer. The new design is recommended for certain cosmetic, pharmaceutical and insecticide products.

'Piggy-back' fruit tray

A new "crop-designed" corrugated tray for use in the shipment of premium-quality peaches, nectarines, berries and other fancy fruits has been introduced by the



Gaylord Container Corp., Div. of Crown Zellerbach Corp., 111 N. Fourth St., St. Louis 2, Mo. Made of special moisture-resistant,

33-lb. corrugated and bleached white liners for the printing surfaces, the trays are constructed to give extra protection against crushing. Wire studs at the sides permit interlocked stacking, which prevents toppling. The trays make appealing displays and allow visibility of all the fruit.

U. S. distributor for European labeler

All models of the "Wam" European line of label-imprinting machines are now available in America through the Jackmeyer Label Corp., 855 Avenue of



the Americas, New York. These versatile machines reportedly handle special imprinting problems on labels and tags at speeds up to 120 per minute. Label sizes may range from 1 by 1/2 in. up to 4 3/4 by 6 1/4 in. Each

model of unit will run in variable sizes. Features include consecutive numbering units; set numbering wheels; automatic pre-set counter; fully automatic label rewinds or automatic label cutting; interchangeable inking units; two-color imprinting; combinations of numbers and letters, and up to 23 lines of imprinting on one label or tag. The machines occupy about half the space of a standard typewriter.

Improved slitter-rewinder unit

The new Model 635 slitter-rewinder for film, foil, tape and paper, announced by John Dusenbery Co., Inc., 271 Grove Ave., Verona, N. J., can be supplied for shear cut, razor blade, rotary burst or score-cut type of slitting. Reported to incorporate the latest techniques in tension controls, slitting and differential winding, the machine has a rated web speed of up to 1,200 fpm. Once the optimum running conditions for a given material are determined, repeat settings may be made without guesswork. Because of these sensitive controls, it is reported, an unskilled operator can readily be taught to operate the unit.

Fully automatic, high-speed caser

A new casing machine announced by the J. L. Ferguson Co., Joliet, Ill., is reported to load gallon and 5-qt. (Imperial gallon) cans of petroleum and chemical products into end-loading-style shipping containers at



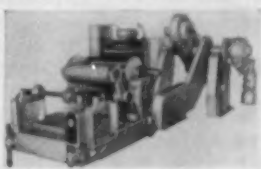
speeds up to 25 cases per minute. Although originally designed for the petroleum and chemical industries, applications of the machine are said to be suited to a wide range of can sizes, loading patterns and products. The fully automatic unit requires only a part-time operator to supply the case magazine with empty, flat shipping containers. All other operations, including forming of cases, positioning them for receipt of cans, grouping and loading cans into cases and sealing, are automatic in this integrated unit. An innovation reported in the pre-loading operation is the receipt of the cans, riding upright, bead to bead. This is the strongest dimension of the can and permits dividing, grouping and inserting six per case without denting, marring or causing leakers.

Testing machine for defective cans

A new automatic testing machine for plant use that is reported to eliminate positively a container having a structural defect or chip has been announced by the MRM Co., Inc., 191 Berry St., Brooklyn 11. The machine can be used directly in a filling line just prior to the filling machine. In operation, a container is fed into the rotary machine under steel shrouds that completely seal the container, which is then given a blast of air pressure. If the container should have a structural defect and smash, particles are confined inside the shroud and swept into a receptacle. If they pass the air blast, containers travel toward a special pick-off device that rejects those having a chipped neck or small hole.

New polyethylene extrusion laminator

The Black-Clawson Co., Dilts Div., Fulton, N. Y., has introduced a new polyethylene extrusion laminator designed to fill the need for a high-speed pilot plant



and commercial unit in web widths from 24 to 48 in. The machine consists of a Model UAL unwind stand with air-operated tension control and the Model PL-450 polyethylene laminator, mounted

on a base which can be moved away from the extruder if a different type of take-off is to be used. This base is mounted on jacks so that the distance can be altered

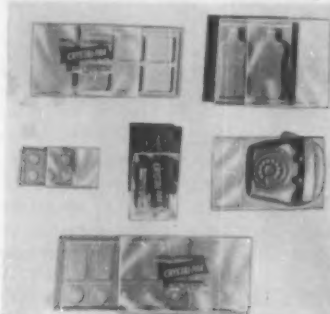
Equipment and materials

[Continued from page 167]

between the rubber-covered roll and the steel cooling roll of the laminator and the die on the extruder. Air cylinders for adjusting the load on each side of the rubber roll individually are contained within the base of the laminator. An adjustable position take-off roll, which also trim slits the edge of the web, follows the laminator.

Shaped-to-fit plastic containers

Crystal Transparent Corp., 101 W. Forest Ave., Englewood, N. J., has announced a new type of all-plastic container that can be custom shaped to fit a product,



either in single or multiple units, or nested. Base of the two-piece, re-usable container is vacuum formed to the shape of the product. The base may be had in various thicknesses; it may be clear, in transparent or

opaque colors, patterned design or printed with copy. The cover has beaded edges which permit sliding and locking into position as a tight closure. Suggested uses for the new "Crystal-Pak" container are for pens and pencils, costume jewelry, cuff links, pharmaceuticals such as pills, hair ornaments and accessories, hardware items, tobacco items, stationery items, notions, games and toys, etc.

Versatile new casing closer

Tipper Tie, Inc., 2165 Morris Ave., Union, N. J., is offering a new casing closer that may be used for first ties, second ties and for every type of closure on casings or bags.



Called the Tipper Clipper, the unit is said to eliminate string second ties on sausages or other similarly filled casings. It is also practical for applying first ties on bagged poultry or meat with or without a vacuum. The closer is a pneumatic-powered device with foot control. It uses closures made of aluminum, supplied in long strips of rounded wire. Circular staple

sections are reported by the supplier to protect casings against cutting.

Cone-top non-food cans

Continental Can Co., 100 E. 42 St., New York 17, is now producing six sizes of cone-top cans to hold automotive, industrial and non-food household products. Capacities of the new family of cans range from

a minimum of 4 fluid ounces to a maximum of 33.5. Depending on can size, they are available with either beaded or screw necks. The cans are suggested for packaging such products as brake fluid, car wash, cleaning fluid, cutting oils, gas additives, glass cleaners, kerosene, lighter fluid, paint remover, polishes, printing inks, rug cleaners, soaps, turpentine and waxes.

Air-operated bottom stapler

Cartons set up with the new Model BSA-Triplex bottom stapler may be re-used many times, according to the Container Stapling Corp., 308 N. Park Ave., Herrin, Ill., maker of the equipment. Three staples are driven simultaneously on the initial stroke, sealing the ends of cartons. On the next stroke, the two outer heads are inactivated by a mechanical trip and the center head then drives this staple across the center seam. Up to 600 or more staples can be driven per minute, according to the supplier.

Traffic control device for conveyor lines

A new device for light-duty applications on converging conveyor lines that reportedly eliminates jam-ups by automatically keeping material flowing from only one



of two converging conveyor lines at a time has been developed by the Harry J. Ferguson Co., Jenkintown, Pa. The unit, called the Fergo-Merger Jr., controls the flow of material weighing 20 lbs. or less, giving the right of way to the package which reaches the intersection

first and holding back the other line until the first package has cleared. The device is easily installed on power conveyors, according to the supplier, and is sensitive enough for use in gravity conveyor lines if the pitch is sufficient.

New 'hidden-thread' closure

A new hidden-thread aluminum bottle or jar cap which will not crack or break, announced by the Aluminum Co. of America, 1501 Alcoa Bldg., Pittsburgh 19, Pa.,



offers clean outside lines for decorative design. Produced in two sizes—for narrow- or wide-mouth bottles and jars—this single-piece Alcoa Hidden

Thread Closure is available in a wide variety of metallic and regular colors. It is reported to be competitive in price with comparable plastic caps or leads.

Clean-machining adhesive

Paisley Products, Inc., 1770 S. Canalport Ave., Chicago 16, has developed a high-strength, clean-machining polyvinyl acetate resin emulsion glue, E2131, which is said to be completely dextrine compatible, enabling producers of cased or cartoned goods to

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superior heat stability in polyvinyl chloride plastisols...unusual efficiency as plasticizer for synthetic resin adhesives and polyvinyl chloride coatings for paper board products. Lower amounts are needed than with other plasticizers to achieve the same heat-sealing temperatures.

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San Francisco, Calif.; Vernon, Calif.;
Atlanta, Ga.; Dallas, Texas

Equipment and materials

[Continued from page 168]

switch from less-expensive adhesives to this resin formulation by simply pouring it into the machine without costly packaging-machine shutdowns to clean the glue box.

Also announced by Paisley Products is a resin-emulsion glue, Glastack-9499, which reportedly penetrates the silicone layer on glass containers to bond on the glass surface underneath. Other adhesives in the new Glastack family are Icestick-H1577 and H1682 of casein origin, Glastack M850 of resin-dextrine composition, Glastack-8883 of dextrine base and Glastack-2247 of converted starch base.

New ribbed package conveyor belt

A series of inverted V-shaped ribs or cleats on the new ribbed package conveyor belt manufactured by the B. F. Goodrich Industrial Products Co., Akron,



Ohio, is said to grip and hold both lightweight and heavy packages in either incline or decline operations. The new "Griptite" belt, made of a flexible rubber compound, is especially designed for steep-angle conveyor operations. The raised ribs are spaced 18 in. apart.

Standard ribs are $\frac{1}{4}$ in. high, spaced four to the inch. Raised ribs are $\frac{3}{8}$ in. high. The belt features self-cleaning action. As it travels around pulleys, the ribs fan out and release any spillage that has fallen into the grooves.

Inks for printing on nylon film

A complete line of flexographic and gravure inks for printing on nylon film is now available from the Ink and Coatings Div. of Claremont Pigment Dispersion Corp., 39 Powerhouse Rd., Roslyn Heights, N. Y. No special equipment or treatments are necessary, according to the company, to produce satisfactory prints in all colors, including metallics, on this new packaging material.

New rectangular aluminum food container

Wrinkle-free sides is the feature of this new rectangular rigid aluminum food container developed by the



Foil Kraft Div. of Kaiser Aluminum & Chemical Sales, Inc., 919 N. Michigan Ave., Chicago 11. Now available as a standard product, this new container has smooth sides

that lend themselves readily to printing and facilitate food removal. Through improved die design and production techniques, the company reports, vertical corrugations of this new Type 3-C container have been restricted to the corners only.

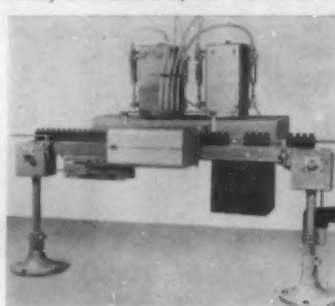
New heavy-duty hydraulic embossing unit

The Champlain Co., Inc., 88 Llewellyn Ave., Bloomfield, N. J., has announced a new heavy-duty hydraulic embossing unit with a 10-ton rated capacity for both "in register" and "over-all" embossing that handles

web materials ranging from paper and paper-backed foil to light paperboard. It is designed to operate in-line with rotary printing or fabricating units, or from reel to reel. Four models are available: A-20, A-27, A-36 and A-44, for web widths of 21, 28, 37 and 45 in., respectively.

New automatic liquid filling machine

Easy change-over from two, four or six nozzles is the feature of a new automatic Filamatic liquid filler recently announced by the National Instrument Co., 2701



Rockwood Ave., Baltimore 15, Md. The basic unit consists of a detachable two-nozzle filler electronically synchronized to a conveyor and bottle escapment mechanism. To convert to a four- or six-nozzle automatic filler, it

is only necessary to plug in one or two additional portable fillers and make a simple adjustment of the bottle escapement. This positive-displacement filler has a filling range adjustable from $\frac{1}{50}$ oz. to 8 oz. per fill, with speed variable from 10 to 120 containers per minute by electronic control. It handles liquids ranging in viscosity from water-thin to a medium syrup and fills directly from drum or container through an inlet hose dropped into the liquid.

New test tank for aerosols

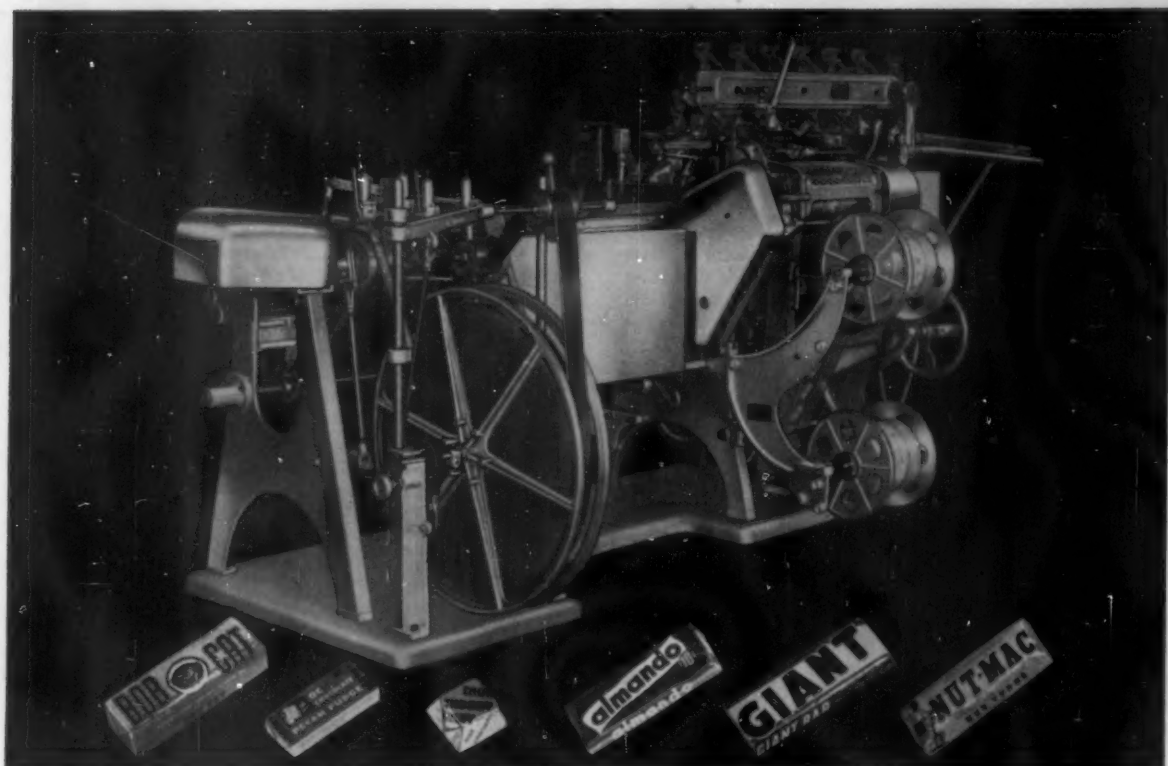
Island Equipment Corp., 27-01 Bridge Plaza N., Long Island City, N. Y., has introduced a new "Styl-O-Matic" heat and leak test tank for automatic testing of aerosols. The unit consists of a tank and a movable chain belt that carries the aerosol down into the tank and up again. Magnets prevent cans from floating or slipping. The chain is available in widths to accommodate either single or double rows of aerosols.

New automatic box closer

Metric Products, 11,800 Bannister Rd., Kansas City 33, Mo., has announced a new automatic box closer that is said to speed packing and cut costs in any production line using paperboard or corrugated cartons. The pneumatically operated machine closes carton flaps and holds them until they can be stapled closed, allowing the operator free use of his hands for the stapling machine. The machine can be adjusted to close any size of box, according to the supplier.

New treated paperboard for foods

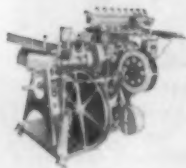
A new grade of paperboard which is claimed to keep food products fresh longer is being introduced by the Mutual Box Board Co., Utica, N. Y. Outwardly similar to conventional paperboard, the new Pure-Kote board is said to be specially treated to render it bacteriosta-



AUTOMATICALLY WRAPS UP TO 125 UNITS A MINUTE

Lynch *Wrap-O-Matic* handles confections, cookies, cracker sandwiches and other standard or irregular shaped products rapidly and at lowest cost. Only two operators are required—one to feed, another to case the wrapped goods. The famous Lynch die-fold with low temperature, thermostatically controlled heat seal is standard . . . glue seal is also available. Cards or boats may be inserted from magazines, or from roll stock as in photo above. Exclusive Lynch-engineered features increase efficiency and cut maintenance costs of *Wrap-O-Matic*. Special machinery and accessories designed and built for all production problems and conditions. Write for full descriptive literature. Address department F.

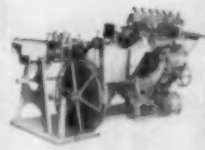
WRAP-O-MATIC



Model RA
Side Intake



Model RS
Cookies or Cracker Sandwiches



Model PB
Straight Intake



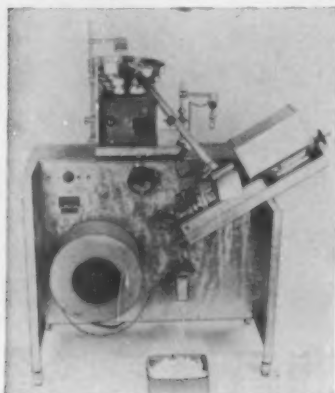
Equipment and materials

[Continued from page 170]

tic, fungistatic and enzyme free. The Pure-Kote treatment is reported to be based on an exclusive formula successfully used for more than 25 years for sterilizing other products. The new treated board is made from reclaimed and refined paper and pulp.

New automatic tube inserter

A new automatic tube-inserting machine that cuts off correct lengths of plastic tubing and inserts them



firmly into aerosol valves and flat or nasal plugs at production-line rates up to 140 per minute has been introduced by the Chase Equipment Corp., 47 E. 19 St., New York 3. Caps are fed to the tube-inserter station from a hopper, which is also equipped to position for proper

delivery, to reject defects and to count. The company also offers assembly service for firms whose cap-production volume is insufficient to warrant purchase of such equipment.

Ribbons in phosphorescent-type colors

Academy Ribbon Mills, 3012 Worthon St., Los Angeles, maker of rayon curling wrapping ribbon, has announced its new Ribnglo ribbons in the following phosphorescent-type colors: cerise red, sunburst orange, lime green and brilliant chartreuse.

'Ribbed' pint plastic container



Exterior design of the new pint plastic container introduced by Premium Plastics, Inc., 2440 Indiana Ave., Chicago 16, consists of prismatic "ribs" or serrations that run vertically along the container body, creating a bright, jewel-like sparkle. Interior of the new container is smooth. Made of high-impact styrene with polyethylene

lids, they come in clear or standard-color plastic.

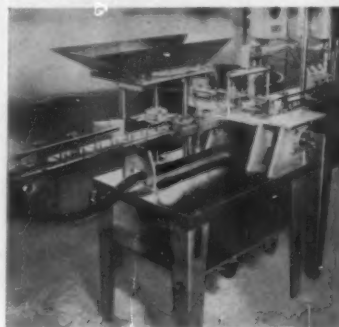
New, low-cost visual package

The new "Snap-Pak" package announced by the Auto-Vac Co., 1984 State St. Ext., Bridgeport, Conn., is said to combine the best features of a standard bubble pack and a skin pack, and costs less than a penny per package. Items to be packaged are placed on the platen of a vacuum-forming machine with a controlled distance between them to allow for a plastic flange. Film (5 to 7½ mils) is drawn tight over the item and fits

snugly down the sides, just slightly underneath the item, forming an undercut. Printed mounting cards used have cut-out openings following the outline of the undercut plastic flange around the merchandise; the plastic-encased merchandise is then snapped through the die-cut opening in the card and locked in position by the card stock.

Combined pellet feeder and can coder

A new machine that automatically feeds an agitator pellet and codes the bottom of a can should be of particular interest to aerosol paint fillers.



The unit, made by Mojonier Associates, Inc., 9151 Fullerton Ave., Franklin Park, Ill., eliminates the need for a person on the line feeding the agitator pellet. With this unit in the line, it reportedly

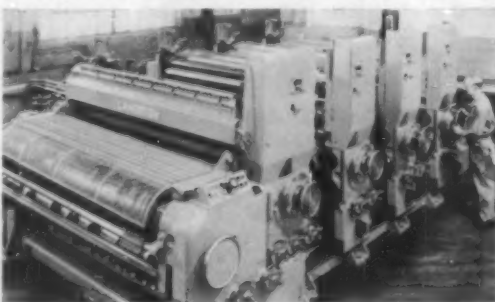
is possible for the same worker to load cans on an unscrambler and replenish the pellets in a hopper.

New boilable polyethylene film

The Clopay Corp., Clopay Sq., Cincinnati, Ohio, is now manufacturing a new boilable polyethylene film, Spencer Hi-D: polyethylene. The film lends itself particularly to applications where boiling or sterilizing is essential.

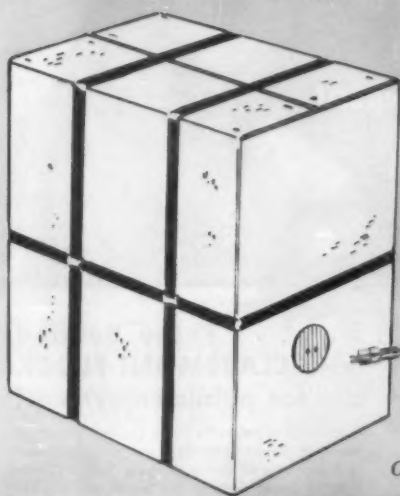
Improved new printer-slotter

To meet the increasing demand for multicolor printing on corrugated boxes (see "Corrugated Goes Beautiful," MODERN PACKAGING, March, 1957, p. 147) The Samuel M. Langston Co., Sixth & Jefferson Sts., Camden 4, N. J., has built a printer-slotter for two-, three- and four-



color printing incorporating design concepts which provide for modern, high-speed, multicolor, corrugated box production. The unit's split or opening construction is arranged so that a two-color press can easily have three, four or more colors added later. Each printing section and the slotting and scoring station

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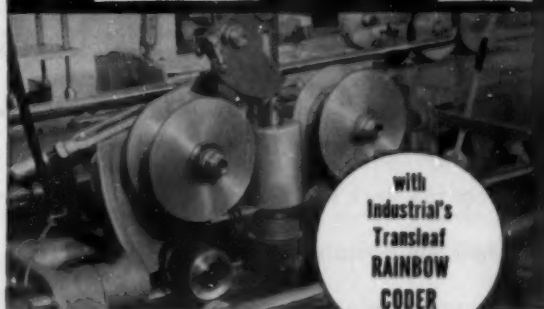


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**NO! Those Bonded
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are for public enjoyment!**



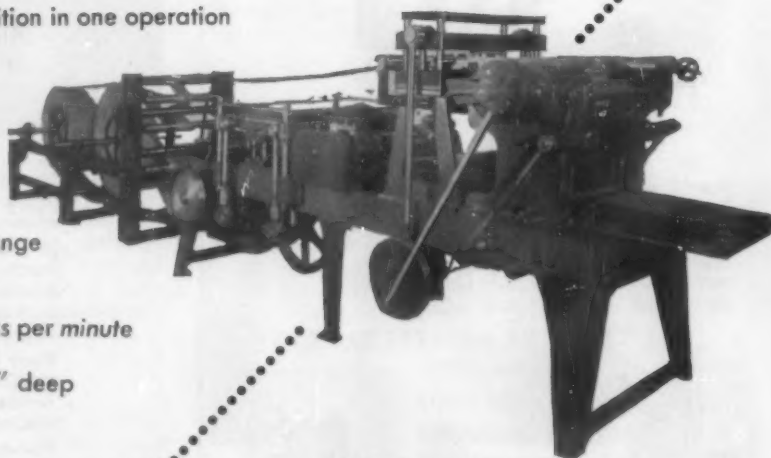
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Equipment and materials

[Continued from page 172]

is a self-contained unit with its own drive. The fixed section houses the main drive motor and the slotting and scoring arrangements. Each printing fountain is equipped with its own special drive. The machine is 42 by 94 in. in size. Larger sizes of 55-by-108-in. and 55-by-128-in. dimensions are also available.

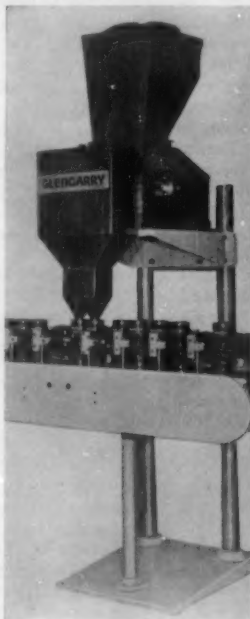
Net-weight filler loads 40 per minute

A new automatic filler announced by Glengarry Processes, Inc., Bay Shore, N. Y., is designed to weigh 1-oz. to 5-lb. loads of food, chemicals, plastics, drugs, powdered metals or similar materials at speeds up to 40 a minute.

The two-station filler is described as low cost, fully automatic and simple to operate. Each station consists of a supply hopper, vibratory feeder, weigh bucket and power-actuated bucket gate.

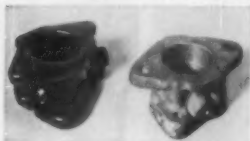
Contact parts are made of stainless steel and all controls are mounted in a remote control box.

Special attachments including hoppers, buckets, shrouds, discharge spouts, counters, cycling devices, etc., are available.



Strip-off protective coating

A new, low-cost, strip-off coating of vinyl plastisol for protection of metal parts and products has been announced by the Chemical Processing Div. of Auburn



Button Works, Inc., Auburn, N. Y. Unskilled labor can apply the coating by simply heating the parts and dipping them in the plastisol. Designed to protect against mois-

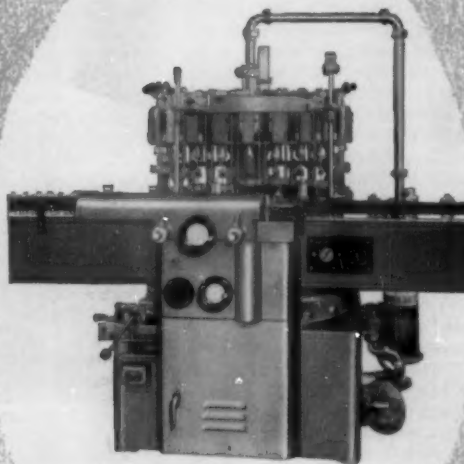
ture, dirt and handling damage, the coating peels off easily when the part is to be used. Thicker coatings help cushion precision instruments and sharp-edged parts against handling damage.

New automatic round steel strapping unit

The new Model-12 automatic round steel strapping machine announced by the Gerrard Steel Strapping Div. of United States Steel Corp., 2915 W. 47 St., Chicago, can tie packages from 2 in. high by 8 in. wide to 20 in. high by 26 in. wide at a rate of 24 ties per minute. It uses from 14- to 18-gauge round steel strapping and tension can be predetermined by means of a simple spring adjustment. Feature of this low-cost machine is a built-in lubrication system which lubricates all working parts by merely pulling a lever.

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Plants and people

Plans for the merger of Dixie Cup Co., Easton, Pa., with American Can Co., New York, have been announced. The agreement has been approved by the directors of both companies and is subject to ratification by Dixie stockholders. The plan calls for Canco's acquisition of all the assets of Dixie and its five subsidiaries. The merger is in line with American Can's program of widening its product lines and would bring Canco into the consumer product field for the first time.

Canco is preparing its Milwaukee, Wis., plant for installation of facilities for processing tinplate and steelplate in continuous coils. The project is part of a \$27-million program to combat rising tinplate and steelplate prices.

Robert A. Turner has been appointed to Canco's San Francisco office as assistant West Coast sales manager.

Some 200 guests were present at the recent opening-day ceremonies for Canco's new coil-stock processing facility in Tampa, Fla. The coil line is the first in the can-making industry and one of many such installations planned by the company for this year.

William R. Adams has been elected president of St. Regis Paper Co., New York, succeeding Roy K. Ferguson, who continues as chairman of the board. Edward R. Gay has been elected vice chairman of the board. Arch Carswell and Benton R. Cancell are now executive vice presidents.

Hugh W. Sloan, vice president and managing director of St. Regis Paper Co. (Canada), Ltd., has been elected a vice president of St. Regis Paper Co. of New York.

A bleached sulphate pulp mill is to be constructed in Alberta, Canada, by North Western Pulp & Power, Ltd., which is jointly owned by St. Regis and North Canadian Oils, Ltd.

Tetra Pak Co., Inc., has opened two sales offices in the United States. Robert P. Doyle



Doyle Black

is western sales manager, covering Alaska, Hawaii and the area west of the Mississippi. He will headquarter in the World Trade Center, Ferry Bldg., San Francisco. The remainder of the U. S. and Puerto Rico is to be serviced by the eastern sales manager, Harold R. Black, with offices at 155 Washington St., Newark, N. J.

James V. Tullo has been appointed vice president in charge of sales for Supermatic Packaging Corp., Newark, N. J.

E. Thomas Frankenfield, Jr., has been made a market analyst in the Film Div. of American Viscose Corp., Philadelphia. Durwood E. Fodrie has been appointed plant accountant for the Film Div. at Marcus Hook, N. J. Robert G. Hayden is now special assistant in the accounting department of Avisco's cellophane plant at Fredericksburg, Va. The Film Div. has opened a cellophane distribution center at 2020 Janice Ave., Melrose Park, Ill., incorporating storage, handling and shipping facilities.

Crown Zellerbach Corp., San Francisco, has promoted Paul Sletton to sales manager for wraps and bags sales, and Millard Rawlings to product manager for wraps, bags and gummed tape. Fran Hausmann has been named assistant to Mr. Rawlings, while Charles McCarthy will assist E. H. Walthers, recently appointed manager of the Distributor Sales Div.



Sletton Rawlings

Crown Zellerbach's San Leandro Converting Div. is soon to be consolidated with the firm's new manufacturing and converting facilities at Antioch, Calif.

John W. Greve has been named assistant sales manager at the Los Angeles plant of Crown Zellerbach's Western-Waxide Specialty Packaging Div.

Roddy Rauch is now sales representative at the Los Angeles plant, while Frank Brown replaces him as division representative in Salt Lake City, Utah. Frank E. Dilling has been named sales representative in northern California, working from San Leandro.

Two major sales divisions have been created by Crown Zellerbach. J. W. Kincaid is now manager of Multiwall Bag Sales Div., while K. M. Aslin has been named manager of Industrial Paper Sales Div. E. P. Partland is to be responsible for both Fiber Overlay and Tabulating Card sales. W. R. Works and L. Lawrence, respectively, are managers of the two sales units supervised by Mr. Partland.



Kincaid Aslin

Victor Industries, Newport, Ark., has announced a multi-million-dollar foreign expansion program. Plants are under construction in Caracas, Venezuela; Toronto, Canada, and Mexico City for the production of aluminum cans and col-

lapsible metal tubes. To implement its overseas operations, Victor has purchased all the machinery, equipment, tools and dies of Globe Collapsible Tube Corp. Long Island City, N. Y.



Bowditch

R. P. Bowditch has been appointed assistant general product manager for Bakelite Co., Div. of Union Carbide Corp., New York. He will locate at the firm's Bound Brook, N. J., plant.

Hugh S. Carpenter has been appointed technical representative at the Clifton, N. J., office of Bakelite's Flexible Packaging Materials Div.

John M. Olin has become chairman of the financial and operating policy committee of Olin Mathieson Chemical Corp., New York. Stanley de J. Osborne has been named president, taking over from Thomas S. Nichols, who is now chairman of the board. John W. Hanes has been appointed financial consultant to the corporation and a member of the financial and operating policy committee.

Stanley W. Koenig has been promoted to director of advertising for Olin Mathieson, with responsibility for the company's entire corporate advertising program.

Forrest F. Tiffany has joined the firm as sales manager in the Cincinnati-Dallas Div. for Olin Aluminum. He will headquarter in Cincinnati, Ohio. Fred H. Edgar has been appointed sales manager in the Detroit-Cleveland Div. for Olin Aluminum, with offices in Detroit.

Olin has also announced the completion recently of the first shipment from its newly opened cellophane plant near Covington, Ky.

The Industrial Chemicals Div. of Olin has started production of chlorine and caustic soda in the new \$8,000,000 annex to its plant at McIntosh, Ala.

The election of Lester R. Edwards as president of National Container Corp. and George J. Schneider as president of National Container Corp. of California has been announced by Owens-Illinois Glass Co., Toledo, Ohio, of which both companies are subsidiaries. Paul R. Gilmore has been promoted to general manager of the Bristol, Pa., converting plant of National Container.

James A. McCormick has been promoted to manager of sales divisions for O-I's Pacific Coast Div. in San Francisco. Arthur E. Skooneberg has been appointed representative in the Sacramento, Calif., branch office. Robert G. Culver succeeds Mr. Skooneberg as assistant manager of the beverage division at San Francisco. Anselm Armer has

"Dowk?"



We realize Hinde (rhymes with find)
and Dauch (pronounced 'dowk') are
difficult names to pronounce.
We also answer to "H & D."
Call us next time you need
corrugated boxes.



HINDE & DAUCH

Subsidiary of West Virginia Pulp and Paper Company

AUTHORITY ON PACKAGING • SANDUSKY, OHIO
14 FACTORIES • 42 SALES OFFICES

Bracon

... SQUEEZE-TO-USE PACKAGING



Success for Sunsters

Here they are! The cream of the 'tan creams . . . the most sensitive and scientific formulae for successful sunning. Note, all are packaged in colorful pliable polyethylene for safety and simple convenience.

Why have these leaders of famous brand names picked BRACON squeeze-to-use tubes and bottles? Because they have natural consumer appeal *without* premium price . . . easy-going displayability . . . and striking color and design effects. Many have a special interior coating to retain product freshness and essential oils.

Practical everywhere, for BRACON tubes never roll up . . . dent . . . crack or tear. Squeeze anywhere for just the right amount of product . . . package always stays neat and clean.

BRACON squeeze-to-use tubes, bottles and cans are partners with all types of liquids, creams and powders in all basic markets. Let us show you how they can serve your products.



BRADLEY CONTAINER CORPORATION

A SUBSIDIARY OF AMERICAN CAN COMPANY

Maynard, Mass. — New York, Chicago, Los Angeles, Toronto

Plants and people

been transferred from the Oakland, Calif., branch to San Francisco.



McNamara

R. Reid McNamara has been elected president of the Sealright Co., Inc., New York. Mr. McNamara was also elected vice president of sales of the Sealright-Oswego Falls Corp., of which Sealright is a wholly owned subsidiary. The Oswego Falls Corp. recently changed its name to Sealright-Oswego Falls Corp.

National Research Corp.'s vacuum metalizing subsidiary, formerly Foil-tone Products, Inc., Cambridge, Mass., has been renamed NRC Vaculite Corp.

A new Cellulose Packaging Div. for the development and manufacture of banding materials used for merchandising multipacks, as overwraps, etc., has been formed by Tee-Pak, Inc., Chicago, makers of cellulose meat casings.

Herbert Plancher has been named a sales representative in the Greater New York area for Tee-Pak.

William M. Allin has been elected a vice president of Continental Can



Allin



White

Co., Inc., New York, in charge of the Gair Containerboard & Kraft Paper Div. William P. White, Jr., has been named assistant general manager of the Hazel-Atlas Glass Div. in Wheeling, W. Va. Ernest N. Stephens has been appointed district sales manager at the Plymouth, Mich., shipping container plant of Gair Fibre Drum & Corrugated Box Div. of Continental Can. R. W. Lindquist, sales manager of carbonated beverage carriers for the Gair Boxboard & Folding Carton Div., has transferred to the Division's New York City offices.

Sun Chemical Corp., Long Island City, N. Y., has leased New York City offices at 750 Third Ave. for occupancy next year by its executive and administrative staff.

Riegel Paper Corp., New York, has appointed W. J. Garrity to the newly created position of manager, Carolina Paper Sales. His appointment is in anticipation of the new Riegel paper machine which is to come into production at Acme, N. C., in 1958. Mr. Garrity's former position as manager of merchant sales has been taken by O. E. Lohrke, Jr. Robert O'Neill has been assigned to Mr. Lohrke's former territory in New



protection

How to Package Taste and Aroma Appeal

Coffee contains essential oils to which it owes its delicious flavor. Proper coffee packaging calls for a paper that is greaseproof, a paper that will keep the full-bodied aroma of the coffee in, a paper that will prevent airborne contamination — will heat-seal, and a paper that will be economical and will fabricate on automatic packaging machines.

Rhineland glassine and greaseproof papers fulfill these requirements perfectly.

We can help to solve your food or beverage protective packaging problem.



RHINELANDER PAPER

Rhineland Paper Company, Rhinelander, Wisconsin
Subsidiary of St. Regis Paper Company



**the best things
do not always come in small packages**

But, small or large, packages of all sizes demand the best possible reproduction. Whether it be for foil, paper, cellophane or paper board, "ACME GRAVURE" cylinders will do the best job for your packaging.

Find out why — now.

acme gravure services inc.

1501 West Congress Street Chicago 7, Illinois Phone: CHesapeake 3-1377

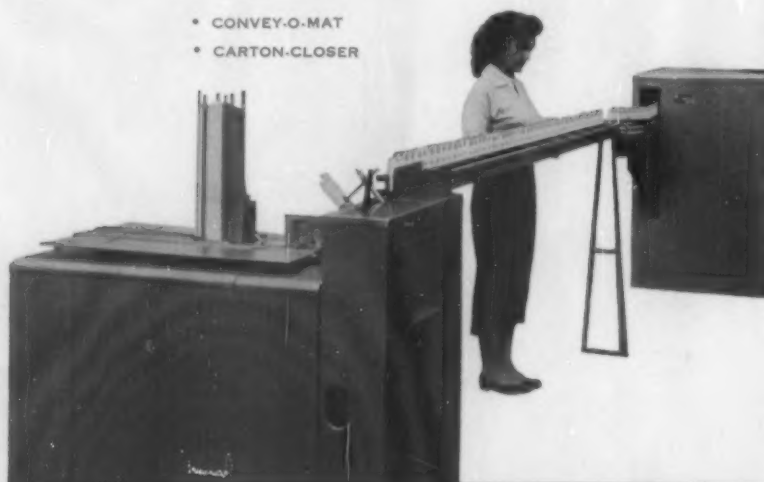
if it's Quality — if it's Delivery — it's acme



Integral Cartoning

Inline carton set-up, filling and closing. A complete cartoning system. From BIVANS, the quality name in cartoning equipment.

- CONVEY-O-MAT
- CARTON-CLOSER



BIVANS CORPORATION

2431 DALLAS STREET, LOS ANGELES 31, CALIFORNIA

Dist. By New Jersey Machine Corp., Hoboken, Cincinnati, Chicago, Los Angeles

Plants and people

England. David R. Howell now covers the western Pennsylvania area.



Chase

Bradley Chase has been named sales manager of the folding carton department of H. S. Crocker Co., Inc., San Bruno, Calif. Mr. Chase was formerly associated with the Bay Cities Paper Box Co. and the Western Paper Box Co., both of Oakland, Calif.

A foil carton manufacturing plant is being constructed in Richmond, Va., by Reynolds Metals Co., Louisville, Ky. The \$3,500,000 facility is expected to go into production next fall.

Howard E. Whitaker, president of The Mead Corp., has been elected chairman of the board of directors and continues as chief executive officer of the corporation. Sydney Ferguson, former chairman, has retired and will continue as a director and member of the executive, finance and policy committees. Donald F. Morris has been elected president



Whitaker Morris Mahrt

of the corporation. Al H. Mahrt has been named executive vice president of finance. George H. Pringle has been elected executive vice president of manufacturing and Leonard R. Growdon, vice president of operations. J. W. McSwiney is now vice president of development, while H. T. Mead has been appointed assistant to the president in charge of converting operations. A. Rodney Boren was elected vice president to succeed Alan G. Goldsmith, retired. William J. Cassady, Jr., has been elected vice president of corrugated box manufacturing.

Mr. Mahrt has also been elected chairman of the board for Mead Board Sales, Inc. Robert J. Blum replaces Mr. Mahrt as president and J. G. Donohoo succeeds Mr. Blum as executive vice president.

A. H. Loux has been named assistant manager of the Industrial Div. of Rap-In-Wax Paper Co., Minneapolis.

Ralph Redmond, Jr., has been named to the newly created position of sales promotion manager for the Toledo plant

of The Ottawa River Paper Co., Toledo, Ohio. Mr. Redmond will coordinate sales efforts and aid in developing new uses for the company's products.

Sonoco Products Co., Hartsville, S. C., has acquired all outstanding stock of the National Paper Co. of Atlanta, Ga., which will be operated as the National Paper Div. of Sonoco Products Co. C. W. Suggs has been appointed manager of the new division.

Thomas S. Carroll has been appointed marketing manager of the household products division of the Colgate-Palmolive Co., New York. Among his other duties, Mr. Carroll will be responsible for packaging of the division's products. Irvin W. Hoff has been appointed marketing manager of the toilet articles division, responsible for packaging of the division's products as well as for advertising and sales promotion.

William W. Dipman has been appointed director of market research and development,



Dipman Donaldson
Union Bag-Camp Paper Corp., New York. Gene Donaldson has been named sales promotion and advertising manager. J. D. Patterson, general traffic manager, has been elected a company vice president.

Florence Patz has been appointed to the newly created position of technical consultant to the sales, art and engineering departments of The Lord Baltimore Press, New York. Robert Pawlikowski has been appointed package construction and design supervisor.

George Wohlgenuth is now handling national accounts from Lord Baltimore's New York office. Replacing him as manager of the Chicago sales office is Albert P. Degen. Ted Terrell has joined the Chicago sales staff. Jack Spicknall has been appointed to the New York sales office.

Kurt G. Gottschalk has been appointed director of the decorated paper division of Royal Paper Corp., New York.

Gorham H. Scott has been promoted to the position of assistant to the president of Oxford Paper Co., New York.

Morgan J. Bearden has been appointed to the sales staff of Milprint, Inc., Milwaukee, Wis. He will represent the firm in the Carolinas.

Raymond Loewy Associates and The Raymond Loewy Corp. have moved to larger quarters at 425 Park Ave., New York.

Jack C. Chestney has joined the sales staff of the Lassiter Corp., New York.

Two new sales offices have been established by the chemical division of Kop-
[Continued on page 184]

Something
goes into
this box
besides
Power Mite flashbulbs...



FEDERAL PAPER BOARD COMPANY, INC.

NATIONAL
FOLDING BOX
DIVISION

MORRIS
PAPER MILLS
DIVISION

SALES OFFICES: NEW YORK, N. Y.; CHICAGO, ILL.; NEW HAVEN AND VERSAILLES, CONN.; BOGOTA, N. J.; BOSTON AND PALMER, MASS.; CLEVELAND AND STEUBENVILLE, OHIO; PHILADELPHIA AND PITTSBURGH, PA.; MARION, IND.

FOLDING BOX PLANTS: BOGOTA, N. J.; NEW HAVEN AND VERSAILLES, CONN.; PALMER, MASS.; STEUBENVILLE, OHIO; PITTSBURGH, PA.; MORGAN, ILL.; MARION, IND. PAPER BOARD MILLS: BOGOTA, N. J.; NEW HAVEN, CONN.; PITTSBURGH, PA.; STEUBENVILLE, OHIO; WHITE HALL, MD.



IMPACT! adds sales punch!

IMPULSE! sparks point-of-purchase buying!

IMPROVEMENT! brings you the newest in glass!

The Hazel-Atlas "Imps" say —



grains and roots,
...sell better

Whether your beverage is *soft* or *hard*, it will benefit from the efforts of the three Hazel-Atlas "Imps". It will get more sales *impact*, and produce more *impulse* sales in beautiful new H-A containers like these:

1. New H-A wine bottles—*crystal-ribbed* at shoulder and base to capture light and color . . . make wine come alive on the shelf.
2. New H-A Permalabel soft drink bottles—brilliant colors permanently fired into the glass.

For beers and spirits, Hazel-Atlas also offers a full line of standard packages . . . lightweight, glamour-



sugar and fruits in H-A glass packages

in-glass bottles of crystal-clear flint and beautiful amber, available in every popular style and size.

Rigid quality-controls keep your H-A containers uniform in size, shape, clarity and color. They perform efficiently on the filling line and display your product at its best. You are sure of fast, dependable delivery during sales peaks and emergencies, served by H-A's

nationwide network of glass plants and warehouses. For details call your H-A representative today.



...glamour in glass!

HAZEL-ATLAS GLASS

division of CONTINENTAL CAN COMPANY
WHEELING, WEST VIRGINIA

Plants and people

[Continued from page 181]

pers Co., Inc., Pittsburgh, Pa. John Sharp will be sales representative in charge of the Kansas City, Mo., office at 2023 Walnut St., while Robert C. Clarke will supervise sales from 1000 N. Hamline Ave., St. Paul, Minn. L. R. Hunter is now sales manager for the chemical division's Midwestern district, while George Kiessling has been transferred to the plastics products section as assistant to the section manager.

Dr. Francis A. Mina has been named technical director of Lodes Aerosol Consultants, Inc., New York. Dr. Mina



Mina

served as technical director of Zonite Products Corp., where he pioneered developments that included the three-phase, water-base aerosol, the first glass aerosol, ultra-low-pressure aerosols and the first aerosol packaging line for colognes. When Zonite Products became Chemway Corp., Dr. Mina was named vice president and general manager of E. A. Bromund Co., a Chemway subsidiary. Dr. Mina's appointment is in line with an expansion program currently under way by Lodes to increase its services to the aerosol industry.



Acklin

as manager of the newly created department.

Harkin Affiliates, molders of plastic boxes have moved to new quarters at 95 Madison Ave., New York.



Dickey

lapeable Tube Corp.

Herb-Shelly, Inc., Farmington, Minn., has named The Philip F. Hartman Co. of Redwood City, Calif., as West Coast representative for its Duratite process for packaging frozen poultry.

B. F. Goodrich Chemical Co., Cleveland, Ohio, is planning to construct a \$5,000,000 chemicals plant near Henry, Ill., where new specialty organic chemicals for use as product improvers will be produced.



Zolte

Ray D. Zolte has been named sales engineer for the southeast states by Simplex Packaging Machinery Div., Oakland, Calif., and by Hudson-Sharp Machine Co., Green Bay, Wis., both subsidiaries of Food Machinery & Chemical Corp.

Paul F. Dickmeyer, a vice president of Fort Wayne Corrugated Paper Co., Fort Wayne, Ind., has been elected treasurer of the company following the retirement of Earle L. Rich. Thompson G. Murray has been elected secretary and comptroller.

H. B. Fuller Co., manufacturer of industrial adhesives, has moved its offices, production and laboratory facilities to a new location at 1144 Eustis St., St. Paul, Minn.

Harriman H. Dash has been appointed technical director of Foam King, Inc., Bronx, N. Y., makers of vinyl foam products. Philip C. Daidone has been named to take over Mr. Dash's former position of research director. Joseph J. Hirsh is being retained by the firm as an independent consultant.

A new sales office in the metropolitan New York area has been opened by Ekco-Alcoa Containers Inc. Art Moses, Tom Leo and Don Conord will staff the new office at 32-75 Steinway St., Long Island City 3, N. Y.

Wayne E. Robinson has been promoted to pulp mill superintendent for East Texas Pulp & Paper Co., Silsbee, Tex. L. T. Benson is now assistant pulp mill superintendent.

John F. Connelly has been elected chairman of the board and president of Crown Cork & Seal Co., Inc., Baltimore, Md. Russell Gowans is now vice president of the company and has been appointed president in charge of the firm's Western Div.

Chanal Plastics Corp., Brooklyn, has moved to a new location at 63-20 Austin St., Rego Park, N. Y.

Earle F. McSpadden, Jr., will be field project manager in charge of construction of the multi-million-dollar cellophane plant to be built near Tecumseh, Kan., by E. I. du Pont de Nemours &

Can we
whip
YOUR
sealing
problem?



DAREX

Flowed-in

GASKETS

If it has to do with container sealants—top, bottom or side-seam—chances are we can!

We offer an enormous fund of container experience "stock-piled" through 37 years of continuous service to the industry.

Sealing compounds . . . application equipment . . . container design problems . . . these are matters we work with every day, treating each assignment as an individual effort on behalf of the customer.

Our sealing know-how can very likely help speed your production, cut your costs, and contribute to a better product. It costs nothing to inquire . . . so why not write to our nearest office today?

★ ★ ★

ONE OF A SERIES

Through national magazine advertisements like this, Dewey and Almy is helping create still greater acceptance of our customers' goods . . . contributing toward their sales as we contribute toward improvement of their products.



**The seal that helps bring her a
shortcut to shortcake**

It's *pressure* that whips up and spins out mounds of rich whipped cream from this Reddi-Wip container . . . pressure securely sealed for instant use by the leakproof DAREX "Flowed-in" GASKET in the valve cap.

Using fully automatic equipment, the "Flowed-in" Gasketing Process lines a ribbon of liquid sealing compound around the inner rim of the valve cap. As the compound is baked, it becomes a rubbery, resilient gasket and seal, permanently bonded to the cap.

The whipped cream aerosol can, made for Reddi-Wip by Crown Cork & Seal Company, Inc., is one of more than 300 applications for the pressure-type container. Whether

for paint sprays or hair sprays, perfume or shaving cream, medication or fire extinguishers, most of them rely on the DAREX "Flowed-in" Gasketing Process for dependable performance, for speed and economy in manufacturing.

The same "Flowed-in" gaskets seal the tops and bottoms of cans, too . . . as well as pails, drums and other containers for all types of industries. Over 50 BILLION containers were sealed the DAREX way last year!

There is probably a place in your plant for the DAREX "Flowed-in" Process. We supply the complete "package" . . . the right compound, the equipment, and the technical assistance . . . to give you *faster mass-production at lower cost.*





DAREX (Flowed-in) GASKETS

THE STREAM-LINED SEAL OF MODERN INDUSTRY

DEWEY AND ALMY
CHEMICAL COMPANY
DIVISION OF W. R. GRACE & CO.



Cambridge 40, Massachusetts • Chicago 38, Illinois • San Leandro, California • Montreal 32, Canada



"We have found
Exact Weight Scales
to be the best . . ."

. . . says A. L. Green, Vice President and
General Sales Manager of
Jekyll Island Packing Co., Brunswick, Georgia

Mr. Green tells us: "They have given us such good results that we have replaced all other scales with Exact Weight equipment."

Jekyll Island Packing Company has depended entirely on Exact Weight Scales for accurate weighing of all its packages for the past several years, now having no less than 18 units in daily use throughout the plant. The fast weighing, fast reading, long life and minimum of maintenance with Exact Weight Scales make them ideally suited for use in food processing.

You'll find Exact Weight Scales in leading food plants throughout the country. Give yourself the same advantages. Write today for full details on the complete line of Exact Weight Scales for food processors and packers.



Sales and Service
from Coast to Coast



THE EXACT WEIGHT SCALE CO.
914 W. Fifth Avenue, Columbus 8, Ohio
In Canada: P.O. Box 179, Station 5, Toronto 18, Ont.

BETTER QUALITY CONTROL . . . BETTER COST CONTROL

TIME
THE WEEKLY NEWSMAGAZINE

SunTube
in **TIME** and **FORTUNE**,
because **SUN TUBE**
is the leader

HILLSIDE, NEW JERSEY
A Subsidiary of American Can Company

**SPEED-UP YOUR
LABEL PASTING**
more than **50%**

POTDEVIN
Semi-Automatic
Feed Label Paster

Instant adjustment
for labels up to 7½"
wide. Operator's
hands always free.
Speeds-up production
with minimum
effort. Write for
literature.



POTDEVIN EXPORT CORP.
244 North Street • Teterboro, N. J.

Designers and manufacturers of equipment for Bag Making,
Printing, Coating, Laminating, Gluing and Labeling

Plants and people

Co., Inc., Wilmington, Del. The plant, scheduled for completion in 1959, is expected to produce 50 million pounds of cellophane annually.



Haselton Davis

Dr. W. R. Haselton has been elected vice president in charge of operations at Rhinelander Paper Co., Rhinelander, Wis. Willmer J. Davis has

been elected vice president in charge of sales. C. C. Johnson has been named sales manager in place of Mr. Davis.

Robert E. Partenheimer has been named industrial division manager for Doepac industrial wadding and related packaging items produced by Doeskin Products, Inc., of New York.

Reuben B. Robertson, Jr., has been elected president of The Champion Paper & Fibre Co., Hamilton, Ohio.

Bernard M. Smith has been named national accounts representative of the



Smith Lawson

Chicago district office, Fibre Box Div. of Growers Container Corp., Salinas, Calif. H. L. Lawson has been appointed manager of the Flexible Pack-

aging Div., replacing T. E. Bruffy. John D. Upp has taken over Mr. Lawson's former position as district sales manager of the San Francisco office.



Jack

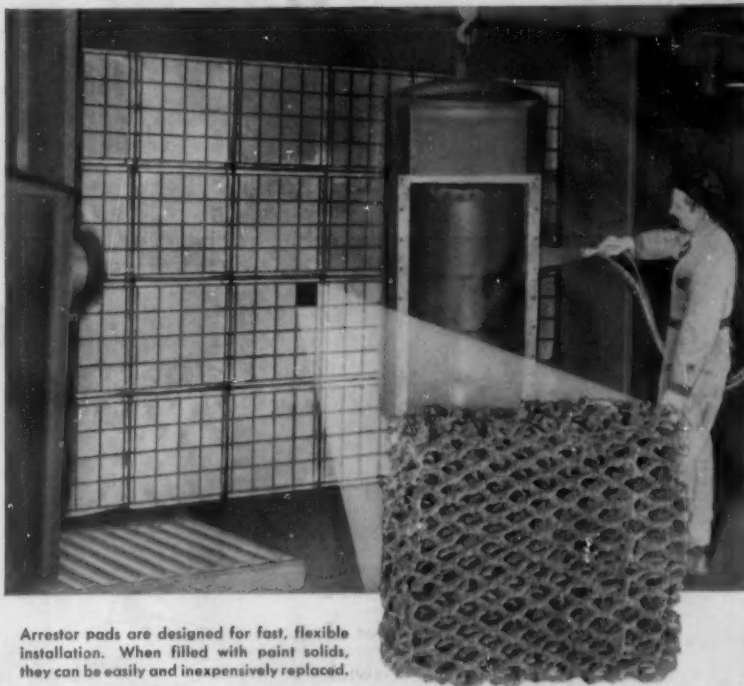
Norman R. Jack has been elected a vice president of the Forbes Lithograph Mfg. Co., Boston, Mass. Mr. Jack has held an executive sales position with the firm for a number of years and in his new capacity will participate more fully in the company's expansion plans.

William C. Nigut has been appointed by Atlanta Paper Co., Atlanta, Ga., to be exclusive marketing consultant for the firm's multi-unit packaging, carry-home cartons, folding boxes and corrugated containers.

The name of Union Carbide & Carbon Corp., New York, has been shortened to Union Carbide Corp. The names of three divisions of Union Carbide have also been changed. Carbide & Carbon

Creative Papers from the mills of Mosinee

...are custom-tailored to specific needs...particularly packagers'



Arrestor pads are designed for fast, flexible installation. When filled with paint solids, they can be easily and inexpensively replaced.

Trapping dangerous paint spray with a honeycomb of paper

RESEARCH PRODUCTS CORP., Madison, Wisconsin, produces arrestors that trap non-used paint — both solids and volatiles — in paint spraying operations. Slit and expanded flame-resistant paper are used to fabricate these highly efficient arrestors. Sandwiched together, the sheets form thousands of tiny paint traps to protect both property and equipment.

This research-minded company

knew just where to go for the paper to meet their specialized requirements —

MOSINEE! Perhaps there's a job that Mosinee sulphate paper can do equally well for you. If there is, there's no better way to discover it than by talking with a Mosinee consultant. And there's no time like the present for setting the wheels in motion by filling out and mailing this coupon.

Mosinee

PAPER MILLS
COMPANY



MOSINEE PAPER MILLS CO., Dept. MPA-6, Mosinee, Wisconsin

Please furnish details on how you can create special papers to meet our needs.

NAME _____ TITLE _____

FIRM _____

CITY _____ ZONE _____ STATE _____

ADDRESS _____

PRODUCT _____

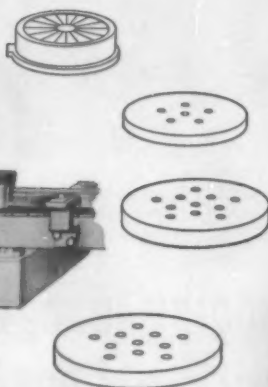
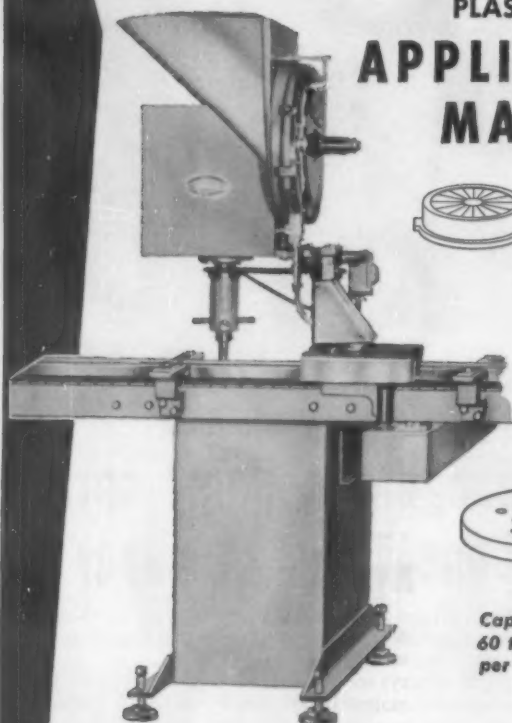


- A MODEL FOR EVERY PURPOSE
- A SPEED FOR EVERY NEED

RESINA

CAPPERS

PLASTIC FITMENT APPLICATOR MACHINE



Capacity
60 to 120 Fitments
per Minute

Operates with or without Screw Capper. Selects and applies varied sizes . . . also solid type fitments conventional in drug and pharmaceutical packaging. Remarkably simple and efficient to operate . . . at low, LOW maintenance cost.

AND SPECIAL MACHINERY

Descriptive Literature on Request

RESINA

AUTOMATIC MACHINERY CO., INC.

572 Smith Street

Brooklyn 31, N. Y.

Agents in Principal Cities throughout United States and Canada.

Plants and people

Chemicals Co. has become Union Carbide Chemicals Co., Linde Air Products Co. is now Linde Co., and Carbide & Carbon Realty Co. will be known as Carbide Realty Co.



Nystrand Gehrke

E. Daniel Nystrand has been appointed vice president in charge of engineering at Paper Converting Machine Co., Green Bay, Wis. Albert

Gehrke has been appointed to Mr. Nystrand's former position of chief engineer.

Arthur A. Rothschild has joined Acepak, Inc., Chicago, as president and managing director of the contract packaging firm. Ida L. Turner is sales manager and Ruth Sulin is head of quality control. Robert Pitts is plant manager.



Zinck Hickey

Arthur C. Zinck has joined Crescent Ink & Color Co., Philadelphia, as divisional manager for metal decorating inks. Joseph E. Hickey

has been appointed divisional manager for lithographic inks.

Marvin W. Swaim has been named president of Alton Box Board Co., Alton, Ill. He succeeds F. Burch Ijams, who has become chairman of the board.

Lawless Bros. Container Corp., North Tonawanda, N. Y., has acquired the Howe Paper Box Div. and the Sani-Tread Div. of Hubbs & Howe Co. They will be operated as divisions of the Lawless firm. The Howe Paper Box Division will become the Lawless Folding Box Div. and Sani-Tread will retain its same division name. Both will continue to operate from their present plant in Tonawanda.

Edward E. Arvidson has joined Hoerner Boxes, Inc., Keokuk, Iowa, and will devote full time to packaging problems of dairy and poultry processors in the Mid-West area.

Walter M. Shohl, Allison F. Stanley, Alfred H. Wilhelm and Clifford R. Wright have been re-elected directors of the United States Printing & Lithograph Co., Cincinnati, Ohio. The company has appointed an administrative and operating committee composed of

R. P. Kane, J. Lambie, H. C. Minnich, R. J. Walters, K. W. Weyer, A. H. Wilhelm and K. J. Wollaeger.

Charles W. Bowers has been promoted to assistant general manager of Specification Packaging Engineering Corp., N. Hollywood, Calif. Harold W. Myers has joined the firm's engineering staff. Additional facilities adjacent to SPEC's present location were recently acquired by the company.

SPEC has formed a new wood crate, box and pallet division to service manufacturers and shippers with production and custom-built containers.

Shuttleworth Carton Co. of New York has received the Director's Safety Award for outstanding safety achievement, presented by the Folding Paper Box Assn. to firms which have not had a lost-time accident for five years.



Dalton

William L. Dalton has been appointed manager of the San Francisco Div. of Container Laboratories, Inc., Chicago. Mr. Dalton, who has been with the firm since 1951, was formerly chief engineer for the Chicago division of Container Laboratories.

Richard B. Tupper has been appointed to the staff of Design Associates, Ltd., New York, as marketing coordinator of all packaging projects with clients and advertising agencies.

Spencer Chemical Co., Kansas City, Mo., has announced an expansion plan designed to double the capacity of its polyethylene facilities at Orange, Tex., from 45 to 90 million pounds annually.



Schwartz



Moore

Basca Mfg. Co., Indianapolis, Ind., has appointed Charles G. Schwartz as the firm's sales manager and Francis R. Moore has been named as

packaging sales manager for the company.

Skilly T. Knox has retired as midwestern boxboard sales manager for Stone Container Corp., Chicago. He will continue to serve the company as a consultant.

George K. Iwashita has been named general manager of Standard-Knapp, automatic packaging machinery division of Emhart Mfg. Co., Portland, Conn.

Radiant Color Co., Oakland, Calif., has appointed Wayne T. Bradfield as midwestern sales manager, with headquarters in Chicago.

Pollock Paper Corp., Dallas, Tex., is constructing a waxed paper plant at San Jose, Calif. Both at this location [Continued on page 192]

PLASTIC ARTISANS' SLIDON* Puts A SHOWCASE ON A CARD

* Trade Mark

Here's another example of the versatility of Plastic Artisans' SLIDON® display packaging.

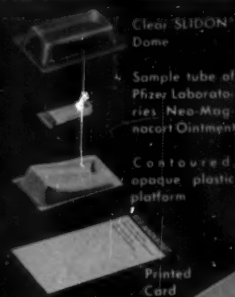
This sampler for Pfizer Laboratories has a clear plastic track-edged SLIDON® Dome for its transparent outer case. Inside the dome, a raised, opaque plastic platform holds the product in a contoured cavity. The printed card is inserted into the tracks to hold all elements in place.

For further information on Plastic Artisans' sampler and sales packaging send for P.A.'S. "Display Packaging" booklet.



PLASTIC ARTISANS, INC.
Dock Street & Martin Place
Port Chester, New York

Custom-designed, mass produced packages, package components, sampling devices, etc., in clear, opaque and colored plastics.



3-WAY IMPRINTING plus numbering...on light and heavy stocks

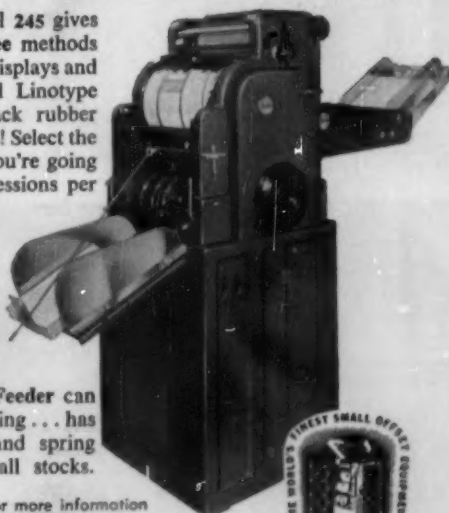
DAVIDSON DUAL-LITH Model 245 gives you not one...not two...but **three** methods for imprinting cartons, packages, displays and literature. You can use standard Linotype slugs, brass-backed or sticky back rubber plates, or presensitized offset plates! Select the method best suited to the stock you're going to use and get up to 6,000 impressions per hour at normal operating speed. Numbering is just as easy—you can number horizontally or vertically, or simultaneously if you wish! The secret's in Davidson exclusive 2-Cylinder Principle with removable segments, which give you top quality offset.

New Continuous Load Friction Feeder can be loaded while machine is running...has diagonal feed conveyor board and spring jogger for accurate register of all stocks.

Ask for a demonstration, or write for more information

DAVIDSON DUAL-LITH

does more for you on one machine



DAVIDSON CORPORATION

A Subsidiary of Mergenthaler Linotype Company
20 STUYVESANT STREET, BRIDGEPLATE, NEW YORK
Distributors in all principal cities and Canada

Text set in Linotype • Headings in ProType

Celanese Corporation

FORTIFLEX

**Warehouse stocks now on hand in Houston, Texas—
Newark, N. J.—Chicago, Ill.—Los Angeles, Cal.**

*An excellent surface free of "waxiness"
... shape-holding rigidity with a marked
gain in strength ... thermal resistance
that extends from below zero to the temper-
atures of sterilization ... sanction by the
Food and Drug Administration ...*

These are the distinguishing characteristics of Celanese Fortiflex "A"—the chief reasons why Fortiflex "A" promises a revolution in the design of closures, bottles and containers. And, as a potential material for supported and unsupported films, its toughness and low permeability are of special importance in food packaging and other

applications requiring low water-vapor transmission, film durability, and sterilization both before and after packaging.

The most significant step forward since Polyethylene

The excellent qualities that have made standard polyethylene the outstanding plastic of this decade are found in Fortiflex "A": resistance to corrosion ... colorability ... moldability and all around economy. But its rigidity, heat resistance and improved surface put Fortiflex in the category of a new plastic with new and broadened uses.

Most important, Fortiflex "A" is not

CONTAINERS

COSMETICS

DETERGENTS



of America presents

*a new linear polyolefin plastic
for packaging*

FLEX "A"

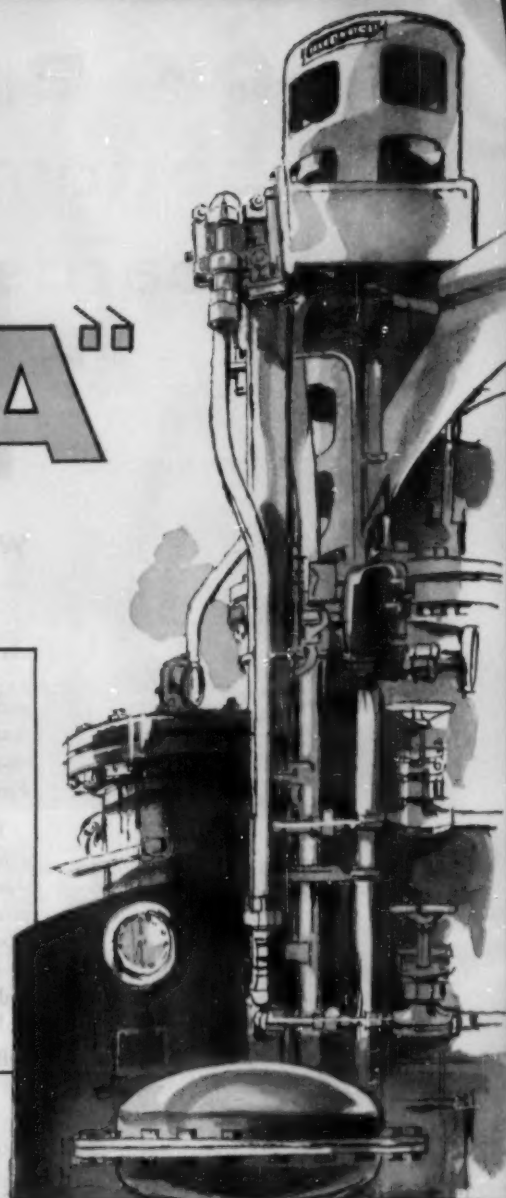
a blueprint plastic. It is a reality—available now in 40 million lb. volume! And, a modern polymerization plant, built by Celanese expressly for the production of Fortiflex, promises to keep the packaging industry supplied with the volume it needs.

Fortiflex "A" is ready for use by your engineers and production staff. For production run quantities—prices—and other information—use the coupon, or call the Sales Development Department, Plastics Division, Celanese Corporation of America, 290 Ferry Street, Newark 5, N. J.

Celanese ® Fortiflex ®

What's in a name?

Prior to its appearance, this new molding thermoplastic has been variously called low-pressure polyethylene, high density polyethylene, linear polyethylene, and olefin polymer to differentiate it from the regular soft, flexible polyethylene. Now, as Fortiflex "A", you will find it setting new standards of quality in caps, closures, containers and other packaging applications.

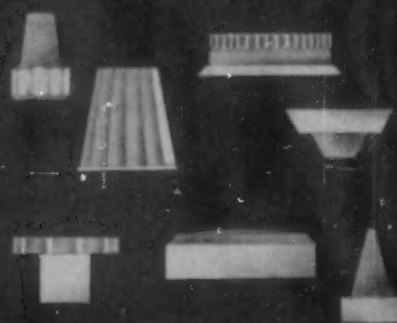


Celanese plastics and resins

MEDICAL

CHEMICAL

CLOSURES



Sales Development Department, Plastics Division, Celanese Corporation of America, 290 Ferry Street, Newark 5, N. J.

Gentlemen:

Please send me information about Fortiflex "A".

☐ I am interested in test-run quantities.

☐ I am interested in production-run quantities.

Application I have in mind _____

NAME _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY _____

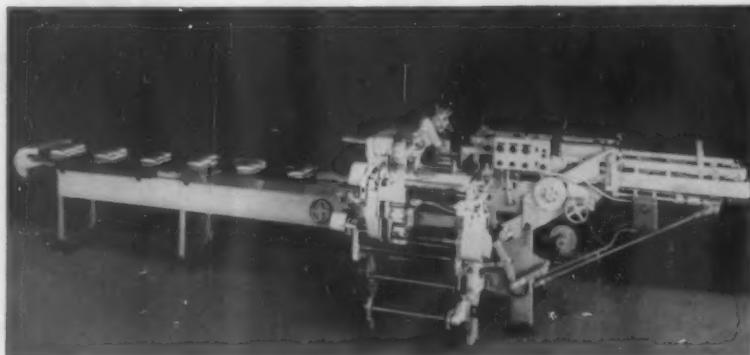
ZONE _____

STATE _____

LOOK BAKERS!

no bottom cards.... ..U boards or trays

NEW 47-H VARIETY PACKAGER



The illustrated Model No. 47-H Variety Wrapping Machine is equipped with extended intake, labeler, reciprocating label imprinter and "one-shot" lubrication to heat seal cellophane overwrapping without trays or cards at speeds up to 65 packages per minute.

you can cut your production costs

**on Clustered Hamburger and Hot Dog Buns,
Cinnamon Rolls, Cake, Iced Cake, Brown 'n Serve
Rolls, Sweet Rolls**

Every *Continuous Flow* machine is created with . . . speed of production, package eye appeal, flavor sealing, versatility of operation and economy . . . as the integral end result of design. On the new 47-H the elimination of bottom cards, U boards or trays gives you a competitive advantage at the retail level and efficient, quick change machine performance provides unusual production versatility. If used for bun wrapping, the machine can be equipped with two speed ranges . . . 30 to 50 per minute for use with 1 bun slicer or 40 to 65 with 2 bun slicers.

let us wrap your product. Send us samples of your products (or if they are perishable, describe the packages and sizes) and tell us the kind of overwrapping you require. We will either wrap and return them promptly with our recommendations, or give you our best suggestions in answer to your inquiry. If you have specific questions, we would welcome a letter from you.

Continuous Flow packaging

BATTLE CREEK
packaging machines, inc.
102 Twelfth Street, Battle Creek, Michigan

Plants and people

[Continued from page 189]

and at the Seattle, Wash., plant of Pollock's subsidiary, Pacific Waxed Paper Co., specially designed machinery will be installed. Byron L. Bowman has been appointed manager at Seattle and Jack Mydske has been promoted to sales manager.



Bruffy

Western Package Products Co., Pasadena, Calif., has appointed Tom E. Bruffy as executive vice president and general manager.

Mr. Bruffy, who has had more than 20 years experience in the transparent film converting industry, will also acquire a stock interest in the company.

Four new directors have been elected by Standard Packaging Corp., New York: O. D. Carlson, P. Richard Clark, Randolph Parker Compton and Kenneth J. Hanau, Sr. Soon after his election Mr. Hanau died suddenly.

R. E. Reed has been promoted to product sales manager of the general felt division of Standard Packaging.

Peter C. Hitt has been appointed special sales representative by Print-A-Tube Co., Rochelle Park, N. J. He will cover the New York metropolitan area, New Jersey and eastern Pennsylvania.

Art Cross and James Coffield have been appointed sales representatives for Peterson Filling & Packaging Corp., Danville, Ill., working from offices at 7720 N. Sheridan Rd., Chicago.

Philip Morris, Inc., New York, has named George Weissman, a company



Weissman Goldsmith

vice president, to the newly created position of director of marketing. His additional responsibilities will include directing and coordinating packaging,

sales, advertising, market research and public relation. Clifford H. Goldsmith, formerly a special assistant to the president, has been named director of packaging development.

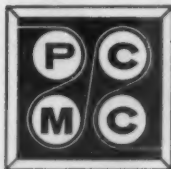
Bernard Schade is now sales manager of the Albany, N. Y., branch of Sinclair & Valentine Co., New York.

William H. Henchey has been appointed community relations manager at the Mechanicville, N. Y., mill of West Virginia Pulp & Paper Co., New York.

Gaither Hatcher has been appointed general manager of the Memphis, Tenn., plant of Dixie Wax Paper Co., Dallas, Tex.

Vernon Duke has been appointed general manager of Dixie of California, Burlingame, Calif.

A new company symbol has been adopted by Paper Converting Machine



Co., Green Bay, Wis. The symbol is being incorporated into the firm's advertising and printing material, as well as on its paper-converting machines.

First use of the symbol is being coordinated with the firm's move to a new plant outside Green Bay.

Harriet Raymond, advertising manager of the Plastics Div. of Celanese Corp. of America, New York, has been re-elected president of the Advertising Women of New York.

The Poly-Seal Corp., New York, has arranged for production in England of its Poly-Seal closure by John Dale, Ltd., London.

Robert J. Barbour has been appointed director of marketing for Gering Products, Inc., Kenilworth, N. J.

Rudolf Cerny has been appointed sales engineer for the Aerosol Valve Div. of Sun Tube Corp., Hillside, N. J.

Chugai Boyeki Co. of Tokyo has been named exclusive representative in Japan by Frank W. Egan & Co., Somerville, N. J., for its paper-converting machinery and equipment.

Design Performance Laboratories, New York, is now offering a new psychometric testing service for consumer products and packaging.

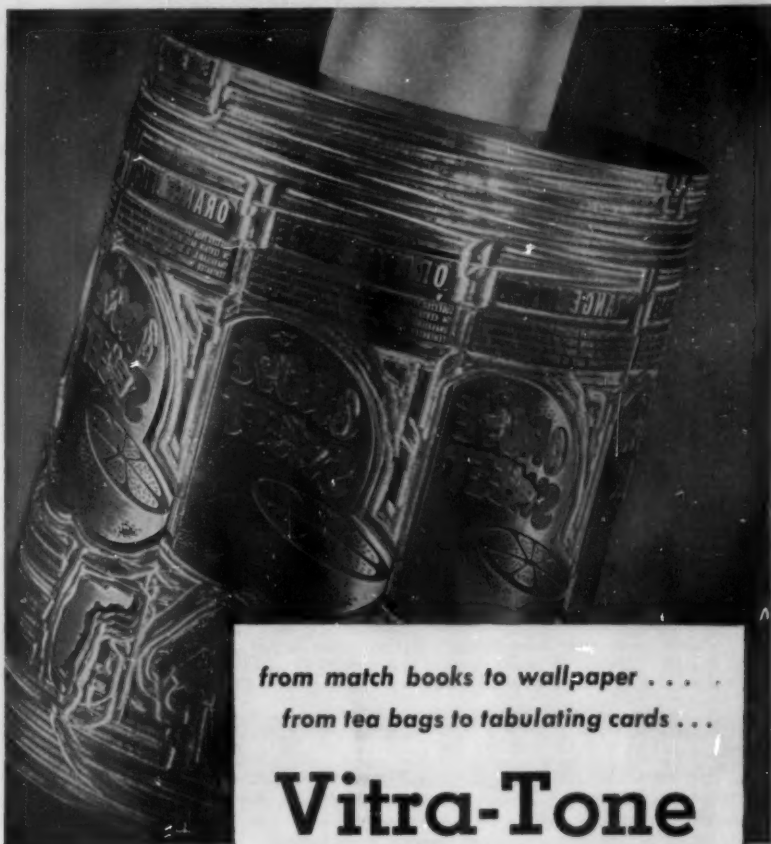
Richford Corp., Oceanside, N. Y., has moved its general sales office and showroom to 350 Fifth Ave., New York.

Miss Dorrit Osann has resigned after many years as head of packaging for Cannon Mills, Inc., New York, and will do free-lance designing and package consulting work.

Western Filling Corp., Los Angeles, is now offering custom packaging service to the pressurized food field, including complete laboratory development facilities and high-speed hot and cold filling equipment.

Trevor W. Moore has joined the staff of the Plastics Div. of The Vichet Tool Co., Cleveland, Ohio. He will handle sales and product development.

Inland Container Corp., Indianapolis, Ind., is constructing a corrugated box plant and warehouse in Dallas, Tex., which will go into operation in July. Ray E. Flint is to be sales manager at



from match books to wallpaper . . .
from tea bags to tabulating cards . . .

Vitra-Tone

STEEL ENGRAVED CYLINDERS

Print Best! . . . Last Longest!

More and more packaging men are discovering that Steel Engraved Cylinders give them the printed package they are looking for. Converters are impressed with the way they out-last all other printing techniques and the fact that every impression is as perfect as the first—even after 3 or 4 years of continuous use! Moreover when printing critical materials you can be confident of perfect results with chromeplated steel.

- ★ Greater Print Clarity For More Perfect Packages
- ★ Faultless Color Registration at Speeds Up To 800 impressions Per Minute
- ★ Chrome Plated Steel Cylinders In Any Size Up To 36" Long
- ★ Patterned Glue Rollers That Assure Stronger Grip

Make your next impression a permanent one—make it a steel engraved cylinder by Vitra-Tone. Write today for prices and details.





Give Your Product That Luxurious Look

A secondary seal to insure product freshness and appearance. Oyster white, opaque, matte finish, vinyl—impervious to alcohol, moisture, oil or hot-packed products. Keep jar lids clean and dry.

Your logotype embossed or hot stamped for beauty—printed directions or sales message on flat discs often eliminates a label.

Jar Discs cost surprisingly little—come in flat or formed, embossed or printed styles. Write for samples and quotations on your letterhead. Indicate sizes and quantity if possible with sample jar for exact fit.

THE WALTER FRANK ORGANIZATION

Design and sale of packaging components. Box 111C, Elmhurst, Ill.

The Best Values on the market!

- Flexographic Presses
- Bag Machines
- Plastic Extruders



We have them...
GET THE FACTS!

BEFORE YOU BUY—WRITE,
WIRE OR PHONE COLLECT.
FOR PRICES AND SPECIFICATIONS

WATKINS 4-6970

H. N. HEINRICH COMPANY

111 EIGHTH AVENUE
NEW YORK 11, N. Y.

Plants and people

the new location, which will also house facilities for Inland's associate, Anderson Box Co.

William J. Green was recently elected president of Thatcher Glass Mfg. Co., Inc., Elmira, N. Y. Hugh J. McPherson is now vice president and treasurer.



Renard

John J. Renard has been promoted to sales manager of the package division of Anchor Hocking Glass Corp., Lancaster, Ohio. Mr. Renard, who was formerly in the Chicago package sales office, has been with Anchor Hocking Glass Corp. since 1936.

The Cryovac Co., Div. of W. R. Grace & Co., Cambridge, Mass., has appointed David H. Taylor as director of marketing. William Harrison has been made sales promotion manager for the firm's Western Div.; William Squire is now handling sales promotion for the Southern Div., while Donald K. Beyer continues as Eastern Div. sales promotion manager.

William E. Nicholson has been elected treasurer and Judson D. Browne has been named vice president of Ferguson-Lander Box Co., Aurora, Ill.


The Dow Chemical Co., Midland, Mich., has announced that its two new plants for making polystyrene foam are now in full commercial production.

The E. H. Southwell Co. of Los Angeles has been appointed U. S. agent for Robinson & Sons, Ltd., paper box manufacturers of Chesterfield, England.

The Center for Research in Package Marketing, Inc., is the new name of Package Research Center, New York. The firm will continue at its present location. Barbara Baer, formerly with Lippincott & Margulies, has joined the organization as vice president and director of communication.

National Starch Products, Inc., New York, has established a scholarship to assist senior high school teachers at Plainfield, N. J., to complete further studies. It has been named the Alfred A. Halden Memorial Scholarship in honor of the late Alfred A. Halden, long time manager of National Starch's Plainfield, N. J., plant and executive vice president of the company.

W. Irving Osborne, Jr., has become chairman of the board of Cornell Paper Products Co., Milwaukee, Wis. His former position as president has been filled by Arthur W. Miller. Wesley W. Race has been made senior vice president for paperboard and Randall A. Ross, senior vice president for converted products. Frank G. Osborne has been



IT TAKES TEAMWORK • a winning quality in packaging, too

Here's a baseman to depend on! Even so, he must depend on the next man. To win in any league, you need an expert on every base. . . . For instance, you can market a flawless product, yet lose the game to one in a more dynamic package. Eye-appeal often makes the sale today, is vital to success. Your products deserve the best packaging ability you can get.

Fibreboard offers you a team of packaging experts, devoted to putting your products into sales-winning uniforms. Colorful cartons, planned and printed for sure take-home appeal. Strong shipping cases, engineered to reduce cost and loss. Personal service, qualified to coach your individual strategy. Can our team help yours? Talk with our nearest representative.

Nation-wide services and offices are described on the back of this page.

FIBREBOARD
PAPER PRODUCTS CORPORATION

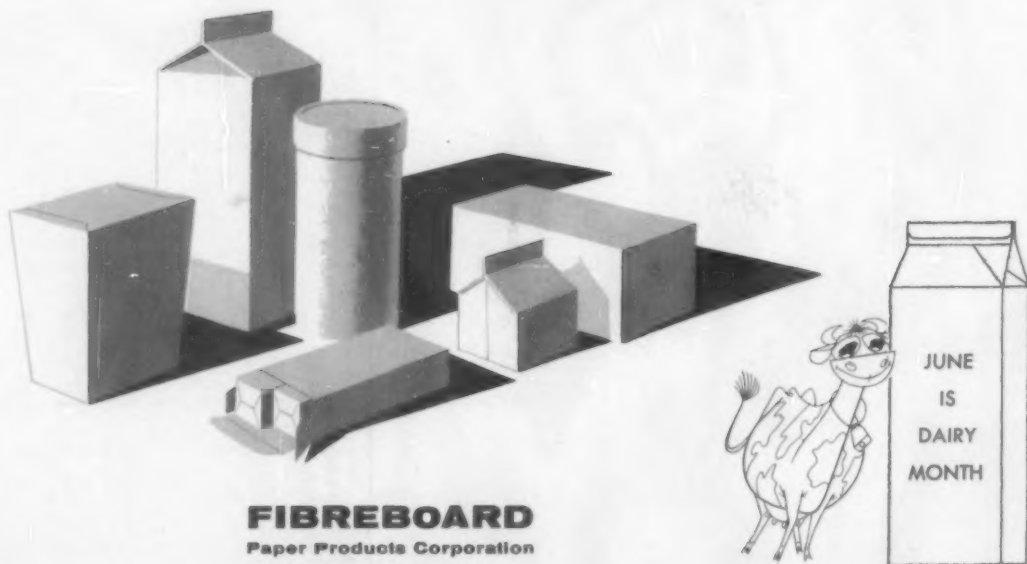


For Dairy Packaging . . . Look to FIBREBOARD FIRST

Year after year, more and more of the finest names (and best sellers) in the Dairy Industry go to market in Fibreboard containers. Our Pure-Pak milk cartons, our ice cream pails, our butter cartons, and other specialties. And our complete line of Ice Cream Cartons—wearing, if you wish, our exclusive Stock Vignettes—colorful, appetite-appealing illustrations. Dairy people like our personal service, our creative design ideas, dependable supply from our strategically located plants. If you are not already among our satisfied customers, our sales representative would like to prove why you should be.

**Pure-Pak Milk Cartons Butter Cartons Shipping Cases
Novelty Cartons Ice Cream Pails Ice Cream Cartons
All Sizes All Styles Plain or Printed**

**Superlative facilities for Letterpress Lithography Rotogravure
Flexography Plus a wide choice of Stock Ice Cream Vignettes**



FIBREBOARD

Paper Products Corporation
Head office: San Francisco

Service offices, West: Billings, Boise, Denver, Fresno, Los Angeles, Missoula, Oakland, Omaha, Phoenix, Portland, Sacramento, Salem, Salinas, Salt Lake City, San Diego, San Francisco, San Jose, Seattle, Stockton, Yakima.
East: Allentown, Baltimore, Chicago, Lancaster, New York, Philadelphia, Salisbury.

don't let your
sales
manager
be a



"PACKAGING ORPHAN"

In your company he may be called the Sales Manager . . . or the Merchandise Manager . . . or the Distribution Manager; the title isn't important. The chap we're talking about is the one whose interest in the packaging function sometimes may be considered secondary, while the successful completion of his duties depends in a significant measure on the appearance of your company's packages and the protection they give to your products.

If this man, whatever his title may be, doesn't get his own personal copy of Modern Packaging every month to keep him up-to-date, you've a "packaging orphan" on your hands. While he should be, he probably *isn't* up on all the latest techniques of package merchandising, on how to package to obtain sales in multiple units, on what's "hot" in protective and decorative packaging. . . .

Modern Packaging isn't a cure-all for this man, but it will keep him posted on the important packaging developments he ought to know about. A twelve month subscription—including the famous annual Encyclopedia Issue—for him costs only \$7.00 in the United States and Canada, \$20.00 elsewhere. Write today; we'll enter his subscription immediately and bill your company later.

SUBSCRIPTION DEPARTMENT

MODERN PACKAGING

575 Madison Avenue
New York 22, N. Y.

Plants and people

elected secretary and treasurer. C. Edward Lindgren, Theodore L. Seith and George L. Petersen, have been elected vice presidents for container, folding carton and Cornell Mill operations, respectively. George P. Christiansen is now assistant to the secretary-treasurer.

The Borden Co., New York, recently opened a second formaldehyde and resins plant at Fayetteville, N. C. The facility is geared to produce 36,000,000 lbs. of formaldehyde annually and will also produce urea and wet-strength resins.

An estimated 200 industry and community leaders attended an open house given recently by Bivans Corp., Los Angeles, with the theme "Seven Years of Progress in Cartonizing Automation."

Ira J. Warshaw has been named general manager of the Los Angeles plant of Oneida Paper Products, Inc., Clifton, N. J.

Robert Ackley has been appointed sales manager of the Westfield River Paper Co., Inc., Russell, Mass.

Glas-Kraft, Inc., Lonsdale, R.I., has appointed Charles H. Trapp to head its newly formed sales promotion department.

Hiram B. Young has been appointed vice president and F. Leonard Bryant, vice president for production by Hooker Electrochemical Co., Niagara Falls, N.Y.

Universal Folding Box Co., Inc., Hoboken, N. J., has appointed Frank E. Kahn as head of its new quality control department.

Richard N. Gavigan has been appointed manager of the new Los Angeles sales office of The Lord Baltimore Press of California, Los Angeles.

Charles M. Hesson, chief engineer of Chisholm Ryder Co. of Pennsylvania, Hanover, Pa., died on April 18 after a long illness. He was 64 years of age. Mr. Hesson had been associated with the packaging and canning industries for some 40 years and held a number of patents on various types of packaging equipment, including labeling, can-casing and container-handling machinery.



Hesson



MARKED IMPROVEMENTS in IDENTIFICATION AND DECORATION

Markem's original foothold . . . in business was really just that: making marking machines for the shoe industry. Since then (1911), the shoe field, and nearly every other industry, has been using the Markem Method more and more. Where Markem was "in at the beginning", you'd expect to see a lot of Markem in the shoe business, and you do. Our 32A's imprint payroll coupon tags; jobs for the 1000, 24 or 79AB, and 105-10 or 45AC include quarter lining, match marking, heel pad and sock lining embossing. Currently, a brand new match marking machine is being field tested, along with some special marking compounds for "hairy" hide. Our "special" field, that began at the foot of the ladder, now reaches from one end of industry to the other.

Nothing succeeds like . . . successful use of Markem machines, it seems, especially with one of our electronics customers. Since 1952, they've bought 42 Markem machines of five different types: 20A's for cylindrical objects; a 25A for marking boxes, tape, etc.; half a dozen high production PLBR's for cylindrical objects; 45AG's for irregular shapes; and more than two dozen 45A's. Latest use of a 45A is imprinting a new type of condenser having right angle wire leads. This customer isn't really typical—but, like all our others, he does know the value of the right marking method for a given job.

13-9-12 — Markem! Markem Machines are used throughout "industry", but the things "industry" marks often end up in the corner store, gas station and gift counter. For example, you may not associate "industry" with "sporting goods", but several sporting goods manufacturers use the Markem Method. For example, one company had been sewing two separate fabric labels on football players' hip and kidney pads (we sent in a substitute illustration you'd recognize). Now, trade-name, size, etc. is imprinted directly on the outside of the curved fibre pads, with a 45A, effectively blocking label inventory problems and sewing costs. Maybe your "industry" has some unsolved marking problems. If so, we'd like to tackle them.



A letter, call or TWX could bring the marking help you need—or can use. The address is Markem Machine Co., Keene 1, New Hampshire.

MARKEM

For your information

Norman F. Greenway, vice president and general manager of the Gair Box-board & Folding Carton Div., Continental Can Co., Inc., has been re-elected president of the Folding Paper Box Assn. Serving with Mr. Greenway on the executive committee will be **William J. Alford, III**, Alford Cartons; **William B. Leavena, Jr.**, Wilkata Folding Box Co.;



Greenway

Arthur N. Morris, Newth-Morris Box Corp.; **Bayle M. Richardson**, Richardson Taylor-Globe Corp.; **Leo H. Shoenhofen**, Container Corp. of America; and **William H. Walters**, U. S. Printing & Lithograph Co.

The Third Joint Military-Industry Packaging and Materials Handling Symposium, sponsored by the U. S. Army in cooperation with the Departments of the Navy, Air Force and Commerce, together with the National Security Industrial Assn., has been scheduled for Oct. 1-3, Fort Lee, Va. Theme of the symposium, open to all those interested in packaging, is "Packaging and Materials Handling in Action." Details on participating in the industrial exhibits or the industrial panel may be secured from the National Security Industrial Assn., 1107 19 St., N.W., Washington 6, D. C., which is arranging the industrial portion of the program.

The general theme of a new book titled "Adaptive Behavior in Marketing," published by the American Marketing Assn., is the way in which marketing institutions adapt to changes in their competitive environment. It presents a collection of papers, edited by **Robert D. Buzzell** of Ohio State University, which were read at the association's convention in Cleveland last December. Copies, priced a \$2 each for members and \$4 for non-members, are available from the American Marketing Assn., 27 E. Monroe St., Chicago 3.

TAPPI's 12th annual Plastics-Paper Conference, scheduled for Oct. 7-9, Sheraton-Gibson Hotel, Cincinnati, is being held at a hotel rather than a college this year for the first time. The increasing attendance at these meetings indicated that holding technical sessions and conference luncheons in a hotel would be more convenient. The technical program is to include one day devoted to the use of plastic-coated papers and board in packaging and another day devoted to rigid products manufactured from paper-resin combinations. Those interested in presenting papers at the conference are invited to contact **John**

Blais, technical program chairman, Catalin Corp. of America, 1 Park Ave., New York 16.

Theme of the TAPPI Coating Committee's Eighth Coating Conference, held last month in Milwaukee, was "The Manufacturing and Processing of Coated Paper and Paperboard." Plant visits were arranged to the Western Printing & Lithograph Co., the Appleton Coated Paper Co., Consolidated Water Power & Paper Co. and the Institute of Paper Chemistry.

The Waxed Paper Merchandising Council has introduced a new "preferred protective packaging" seal to be used in all of its consumer and trade advertising and as an integral part of the Council's entire promotional and merchandising program. The oval-shaped seal bears the legend, "Flavor-Sealed in Waxed Paper for Your Protection" and is aimed at building consumer demand for waxed-wrapped food products. The seal is available for food processors to tie in with and is expected soon to appear as an integral part of package design for bread, frozen foods, biscuits, crackers, cereals, butter and other dairy products, potato chips, other snack items and processed foods that use waxed paper packaging. The Council has prepared a special "Hitch Hike" Planning Guide telling how food processors and others can hitch sales efforts to this merchandising program. The Planning Guide is available free on request to **Laurence T. Herman**, executive director, Waxed Paper Merchandising Council, 38 S. Dearborn St., Chicago 3.

A permanent Packaging Center is being established in Great Britain, where up-to-date information on all aspects of packaging will be available. The Packaging Center, to be located in Central London, will feature a permanent packaging exhibition staged by leading suppliers of packaging materials and equipment and staffed by the Center. An Information Bureau will be available to provide sales literature, technical data and other information on the exhibits. The British Institute of Packaging, which is cooperating in the establishment of the Center, has set up a Consultative Panel which will serve as liaison between the Institute and the organizers of the Center. It is expected that national headquarters for the Institute will be housed in the Center and that a Packaging Club will be set up to provide facilities for industrial meetings and discussion groups. Temporary administrative offices of the Packaging Center are at 20-21 Took's Ct. Cursitor

St., Chancery Lane, London, E. C. 4, England.

The Report of the 41st National Conference on Weights and Measures, 1956, National Bureau of Standards Miscellaneous Publication 219, is now available on order from the Government Printing Office, Washington 25, D. C. Priced at 70 cents, this annual publication contains addresses and committee reports delivered during the conference, including a report of a symposium on pre-packaging, reports on food packages, trade practices in the meat-packing industry and packaged-food standardization.

A technical program of 90 presentations featured the 11th annual convention of the American Society for Quality Control, held last month in Detroit. Plant tours by those attending included Chrysler Corp.'s Plymouth Division, General Motor's Cadillac Motor Car Division, Ford's Rouge operations and Parke, Davis & Co.

Twenty-two world authorities on plastics are to address the convention to be held in conjunction with this year's International British Plastics Exhibition at Olympia, July 10-20. Latest extrusion

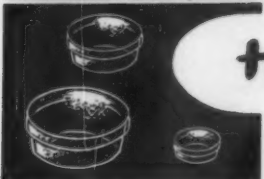
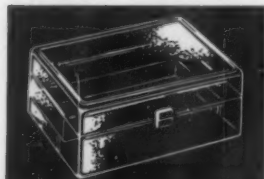
What's doing

- June 11—Inter-Industry Food Packaging Committee, Chicago.
- June 11-15—Western Plant Maintenance & Engineering Show and Conference, Civic Auditorium, San Francisco.
- June 16-17—Canadian Paper Box Mfrs. Assn., 42nd annual convention, Chateau Frontenac, Quebec, Canada.
- June 16-21—American Society for Testing Materials, 60th annual meeting, Chalfonte-Haddon Hall, Atlantic City.
- June 23-29—International Design Conference, Aspen, Col.
- June 24-26—National Wooden Box Assn., annual summer meeting, Lake Placid Club, Essex County, N. Y.
- June 24-26—American Management Assn., Packaging Clinic, New York.
- June 24-28—Forest Products Research Society, 11th annual national meeting, Hotel Statler, Buffalo, N. Y.
- June 30-July 3—Housewares Show and Self-Service Equipment Show, Coliseum, New York.
- July 1-3—Pacific Coast Paper Box Mfrs. Assn., annual convention, Sun Valley, Idaho.
- July 8-12—National Housewares Mfrs. Assn., 27th National Housewares Show, Auditorium, Atlantic City.
- July 10-20—British Plastics Exposition and Convention, Olympia, London, England.

Harkin

Plastic Molded Boxes Stop Buyers in their Tracks...

Manufacturers, importers and jobbers from all over the nation report Record Sales chalked up by these dramatic plastic boxes.



HUNDREDS of Stock Plastic Boxes to choose from... MOST SIZES

NO MOLD CHARGE for Special Boxes. Custom-made boxes made to meet your specific requirements without mold charges. Send us your product for a model, at no obligation.

PRICED LOWER THAN MOST OTHER BOXES. Because of Harkin mass production and know-how as box specialists. **STIMULATE YOUR PROMOTION.** Give your sales program a new lease on life with these plastic molded boxes. They're re-usable. Their beauty puts your item in the gift category. The fact that your product is always visible and dust proof cuts handling damage to a minimum.



SUNBURST—7½" x 4½" x 2½"
All Gold, hinged box with attractive sunburst design.



ORCHID—9½" x 7½" x 1½"
Gold orchid on clear or pearlized cover

Harkin Affiliates, inc.

* Call or write today for new illustrated brochure and price list. Dept. MP

"MOLDING SPECIALISTS OF PLASTIC BOXES"

95 MADISON AVENUE • NEW YORK 16, N. Y. • MURRAY HILL 6-2415

"TWENTY YEARS OF EXPERIENCE IN THE CREATION OF SPECIAL PACKAGING"

LIKE THIS

Salt and Pepper

ON YOUR

FOOD.....



Zumbiel creative packaging can produce that *most wanted* flavor in your marketing program—the flavor of greater volume and increased profits. May we—without obligation—submit "sales-flavored" design ideas, and cost estimates.

Creators of "Sell-Inspired" packages for 81 years

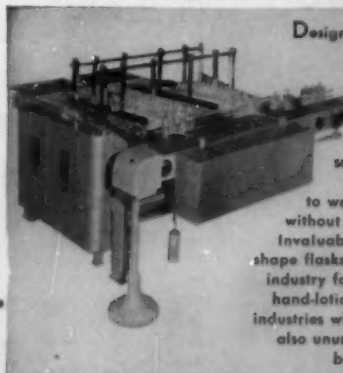
THE C. W. ZUMBIEL CO.

2339 Harris Ave. Cincinnati 12, Ohio
Established 1876

NEW! High Speed

WALKIE-PUSHIE

UNSCRAMBLER



Designed to accommodate practically any size or shape container at speeds up to 400 to 450 per minute

Bottles, jars and other containers are unscrambled without agitation and transfer from chain to walking beam is very gentle, without any contact of containers. Invaluable in the distillery for odd shape flasks, in the drug and cosmetic industry for unusual after-shave and hand-lotion bottles, as well as other industries wherein not only round but also unusual shapes and sizes must be handled at high speeds.

FREE!

MAIL THIS COUPON FOR FULL DETAILS

ISLAND EQUIPMENT CORP.
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Long Island City 1, N. Y.

Dept. MP-0

Sounds interesting. Send me full details on your WALKIE-PUSHIE UNSCRAMBLER.

COMPANY

NAME

ADDRESS

CITY

STATE

Why THESE AND OTHER FAMOUS BRANDS package THE SEAL-SPOUT WAY



... Seal-Spouts

— the aluminum pouring spouts

Seal-Spouts have established consumer acceptance and preference. Seal-Spouts are automatically applied to packages right in the production line. Packages of free-flowing products are—

- EASIER TO OPEN
- EASIER TO POUR
- EASIER TO STORE

For Details Contact



SEAL SPOUT Corp.

MOUNTAINSIDE, NEW JERSEY

For your information

and injection molding techniques will be discussed, together with recent developments in polyethylenes, polyvinylchloride and foamed plastics. Tickets may be had free of charge from British Plastics, convention organizers, Dorset House, Stamford St., London, S. E. 1, England.

Dr. Laurence V. Burton, retired executive director of the Packaging Institute, Inc., has been named winner of the International Award sponsored by the Australia Regional Sections of the Institute of Food Technologists for "outstanding efforts to promote the international exchange of ideas in the field of food technology, thus contributing to international understanding."



Burton

The Chemical Specialties Mfrs. Assn.'s Aerosol Division has launched its industry-wide program of consumer publicity and promotion for aerosol packaging. The initial program, which will run for one full year, is backed by 53 member companies, including container, valve and propellant manufacturers; contract fillers and packers, and aerosol product marketers. Basic objective of the program is to increase the sale of aerosol products by consumer information and education, encouraging manufacturers to convert to aerosol packaging, exploring new markets and establishing a recognized central industry source of information on aerosols. CSMA's Aerosol Division Administrative Committee has named an Aerosol Steering Committee headed by Frederick G. Lodes to guide the program.

An overseas exhibit of the finest examples of American and Canadian lithography is being sponsored by the United States Information Agency. First showing will be in Bonn, Germany, and it will then tour that country for a year. The exhibit consists of 270 prize-winning specimens in the recent 6th Lithographic Awards Competition sponsored by the Lithographers National Assn.

Nineteen members of a special salesmanship course for the Folding Paper Box Assn. were graduated recently from Temple University's Bureau of Industrial and Special Services, Philadelphia. The course, developed by the association, has been given by colleges and universities in six other cities: Boston, Baltimore, New York, Chicago, St. Louis and Minneapolis.

More than 250 trademark lawyers met in Chicago at the recent annual meeting of The United States Trademark Assn. Major current problems considered were

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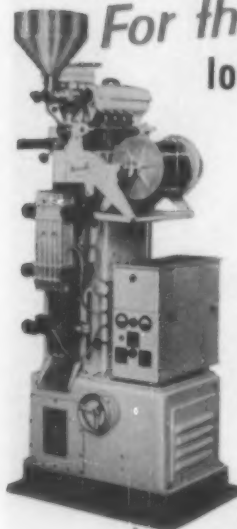
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the marketing aspects of trademark use and the development of pertinent legislation and administration.

"The 1957 Directory of German Machinery and Equipment Manufacturers" (Nordeman Publishing Co., Inc., 14 E. 62 St., New York 21; \$3.50) has been published by the Assn. of German Machinery Manufacturers, Frankfurt, Germany. This 800-page English-language directory lists 20,000 manufacturers of all types of machinery, precision instruments and industrial equipment, classified in 9,000 product categories.

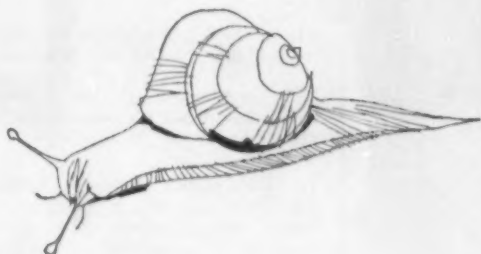
Fraser Paper, Ltd., New York, is distributing the second annual "Graphic Arts Progress 1957," a collection of outstanding articles and abstracts which have appeared in leading trade publications. The articles were selected, by a panel of judges from the printing industry, for their superior caliber and they relate to new processes and ideas in the field of graphic arts. Among the articles in this "best of the year" collection are three which appeared in MODERN PACKAGING: "Printing by Transfer: A New Method," Aug., 1956, p. 138; "New Light on Color," Nov., 1956, p. 104, and "Peel-Off Lithography," Nov., 1956, p. 144.

The establishment of a \$2,000, four-year scholarship in Packaging Engineering at Michigan State University, East Lansing, Mich., has been jointly announced by Frank Greenwall of National Starch Products and A. Douglas Murphy of the Packaging Institute. Michigan State is the only university in this country offering a four-year course leading to a Bachelor of Science degree in Packaging Engineering. Interested qualified candidates are encouraged to contact James W. Goff, Dept. of Forest Products, Michigan State University, East Lansing, Mich.

MODERN PACKAGING last fall established a \$2,000 annual Research Fellowship at Michigan State, the first recipient of which will be announced this fall for the school year 1957-58.

The Traffic Committee of the Fibre Box Assn. has under study revisions of specifications for fibre boxes used for packaging fresh fruits and vegetables and an adjustment of carload rates on corrugated boxes. Oliver H. Stieber of Crown Zellerbach Corp., committee chairman, reports that the group is working closely with the National Container Committee of the Assn. of American Railroads and Growers Groups, and that satisfactory progress is being made.

Raymond H. Dowd of Dennison Mfg. Co. has been re-elected president of the New England Paper Box Mfrs. Assn. Mr. Dowd is also a director and chair-



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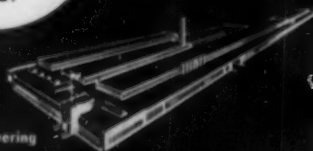
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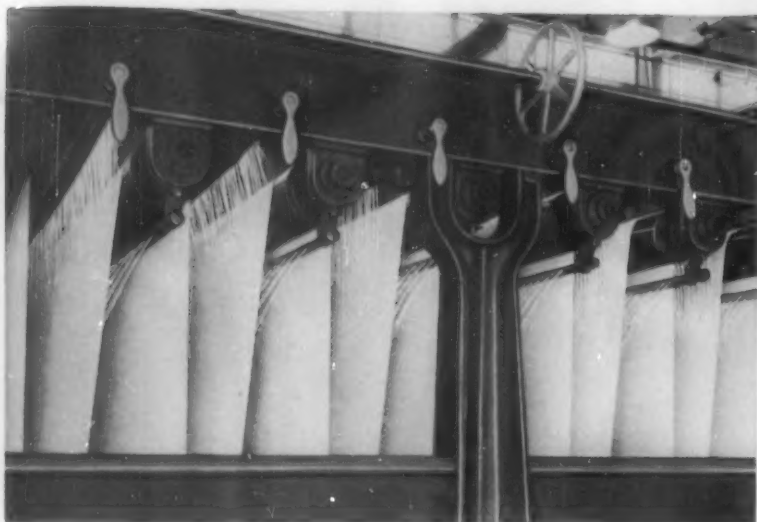
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man of the public relations committee of the National Paper Box Mfg. Assn.

New headquarters for the Folding Paper Box Assn. of America are at 222 W. Adams St., Chicago 6.

The 1959 British Packaging Exhibition, held biennially in collaboration with the British Institute of Packaging, is scheduled for Sept. 8-18 of that year in the Grand and National Halls at Olympia, London. Firms wanting to participate in the 1959 exhibition are advised to write to Provincial Exhibitions, Ltd., Exhibition Organizers, City Hall, Deansgate, Manchester, England.

The first regional meeting of The Packaging Machinery Mfrs. Institute was held in Boston, Mass., last month, under the direction of N. Stanley Ross of Pneumatic Scale Corp., Ltd., and a PMMI director. Regional meetings have been inaugurated to bring the Institute into closer contact with the problems of member companies at the regional level. Among speakers at the meeting were K. B. Hollidge of the Arthur Colton Co., Robert G. Dexter of Barclay & Dexter, Frank L. Miller of General Electric Co. and L. H. Zahn, vice president of the Packaging Institute and currently serving with the Commerce Department's Business and Defense Service Administration. Mr. Hollidge reported to the 73 representatives of 33 member companies present that more than 95% of available space in the Packaging Machinery & Materials Exposition for 1958, to be held in Atlantic City, March 25-28, next year, had already been requested by exhibiting companies.

"Design and Human Value" is the theme of the seventh annual International Design Conference, scheduled for June 23-29 at Aspen, Col. Information on the event may be obtained from the International Design Conference, 22 E. Illinois St., Chicago 11.

The latest edition of the National Safe Transit Committee's "Test Procedures" booklet covering NST Projects 1 and 1A, sponsored by the Porcelain Enamel Institute, has been completed. This latest edition was prepared by the committee's Technical Planning Division, chaired by P. W. Bush of Westinghouse Electric Corp. Project 1 covers the procedure for testing packaged products weighing 100 lbs. or more and Project 1A covers procedures for testing packaged products weighing less than 100 lbs. Single copies of the booklet may be obtained at no charge from the National Safe Transit Committee, 1145 19 St., N.W., Washington 6, D. C. A charge of 25 cents per copy is made for orders of two or more copies.



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EQUIPMENT • SUPPLIES • SERVICES

STOCK PLASTIC CONTAINERS. Illustrated catalog describes, gives dimensions of line of rigid plastic containers, including boxes, trays, and jars available clear or in colors. Also shows formed acetate domes and slide cover boxes. Oppenheim Co. (F-751)

AUTOMATIC WEB GUIDING EQUIPMENT. Illustrated catalog contains specifications and description of company's line of automatic web guiding equipment for processing paper, film, foil, cloth, rubberized fabric and other web-fed materials. Fife Manufacturing Company, Inc. (F-752)

MANUAL BAG PACKAGER. Folder describes unit designed to aid in the manual packaging of bulky or irregularly shaped items into film, paper, gusseted, plain or flat bags. Includes device that directs air into polyethylene bags, breaking static block. Errich International Corporation. (F-753)

OFFSET PRINTING. Description of company's single and multi-color offset presses is printed on one side of boxboard. Reverse side is a multi-color sample of reproduction possible with presses. Miehl Printing Press & Manufacturing Co. (F-754)

COATING AND IMPREGNATION CONTROL. Data sheet describes differential measuring systems for controlling coating and impregnation weights of such materials as gummed and adhesive tapes, plastic-coated papers and fabrics, impregnated papers and fabrics. Electronics Division, Curtiss-Wright Inc. (F-755)

HEAVY-DUTY CORRUGATED CONTAINERS. Folder contains diagrams of representative types of container with triple rows of fluting said to withstand compressive loads up to 1000 lbs. per lineal foot. Tri-Wall Containers, Inc. (F-756)

PROTECTIVE PACKAGING MATERIAL. Illustrated folder describes "Packit", a cotton wadding suitable for cushioning, surface protection. Available in sheets, rolls, or fabricated for specific use. The Stearns & Foster Company. (F-757)

SCALE CATALOG. 26-page catalog contains illustrations, specifications, descriptions of line of general purpose, heavy duty and precision measurement scales. Deteco Scales, Inc. (F-758)

AEROSOL RESEARCH. Folder describes company's consultation and research service on valves, containers, components and products for aerosol packaging. Reed Research Corporation. (F-759)

PAPERBOARD SAMPLES. Folder contains samples of company's printed, white, wood grained, tinted kraft board. Contains price list. Southern Special Products Corporation. (F-760)

MULTI-COLOR PRINTING PRESS. Folder describes press available in one-, two-, or three-color models that prints letterpress, or offset on flat, round, raised or recessed articles. Cosom Engineering Corporation. (F-761)

GUMMED PAPER SAMPLE. Folder contains comprehensive description with swatches of line of gummed papers available in white and colors in a wide variety of grades. Mid-States Gummed Paper Company. (F-762)

FILLING DRY PRODUCTS. Folder describes line of net weighers for filling dry products into cartons, bags, cans, or jars in amounts ranging from a fraction of an oz. to 5 lbs. Triangle Package Machinery Co. (F-763)

PACKAGING CHEMICAL PRODUCTS. Folder illustrates use of corrugated bulk containers for packaging powders, granules, flakes, chips, pellets and similar materials. Includes case history descriptions of applications. Gaylord Container Corp. (F-764)

FINANCING MACHINERY PURCHASES. Folder describes company's plan for financing purchase of machinery and equipment. Discusses short and long term plans. C.I.T. Corporation. (F-765)

SLITTERS, REWINDERS, SHEETERS. Folder contains illustrations and descriptions of company's line of web handling equipment, including score-cut slitter, rewind slitters, drum sheeters. Doven Machine and Engineering, Inc. (F-766)

HAND SEALER FOR PLASTICS FILM. Illustrated folder describes, portable unit for sealing polyethylene, Pliofilm, vinyl and other plastic films. Particularly suitable for sealing bags. Can also be used as bench sealer, or for continuous duty sealing. Doughboy Industries Inc. (F-767)

BOTTLE HANDLING EQUIPMENT. Data sheet describes unit that spots bottles properly, arranging them in desired position on conveyor belt. Handles 50 to 150 bottles a minute. Includes installation diagrams. Gisholt Machine Company. (F-768)

PRESSURE-SENSITIVE PLASTICS TAPE. Illustrated folder describes "Kylon" tape, available transparent or in several colors. Said to be waterproof, moistureproof, and suitable for printing. Mystik Adhesive Products Inc. (F-769)

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STEEL STRAPPING MACHINES. Folder illustrates applications for power-operated strapping machines for applying steel strapping to cartons, boxes, bundles. Includes specifications for several models. Signode Steel Stamping Company. (F-770)

ROTARY HEAT SEALER. Literature describes combination machines that seal glassine and wax bags, cool heat sealed area until seal is set, and code date. Pack-Rite Machines. (F-771)

TABLET COUNTING AND FILLING MACHINE. Literature describes machine that will count tablets and capsules, and fill them into vials or bottles at speeds up to 1200 containers per hour. The Burnet Co. (F-772)

TAPE DISPENSERS. Data sheet contains descriptions, prices, for line of hand-operated pressure-sensitive tape dispensers. Derby Sealers, Inc. (F-773)

PRESSURE SENSITIVE TAPES. Data sheet lists characteristics, properties for line of pressure-sensitive tapes, including fiber glass-reinforced, paper, acetate, cloth, and waterproof types. The Seamless Rubber Co. (F-774)

METAL CLOSURE FOR PLASTIC BAGS. 8-page folder describes closure for bags and casings made of polyethylene, cellulose, Saran and similar packaging materials. Said to provide air tight closure. Also illustrates and describes machines for applying these closures. Vac-Tie Fasteners, Inc. (F-775)

METAL CANISTERS. Literature contains illustrations of decorative metal canisters embossed with porcelain-like design and suitable for packaging products such as cookies, tea, candy, bath salts, soap, powder. Includes prices. The Daher Company, Inc. (F-776)

SLITTER-REWINDERS. 8-page booklet contains illustrations, diagrams and applications for line of slitter-rewinders suitable for paper, light board, cloth, plastics, foil. Also provides information on line of unwind equipment. The Dilts Division, The Black-Clawson Co. (F-777)

FILLER FOR VISCOUS PRODUCTS. Folder describes unit that fills viscous products into containers in quantities of 1/4 to 32 oz. at speeds of 12 to 25 strokes a minute. Suitable for pilot runs and laboratory testing. Hope Machine Co. (F-778)

UNIT PACKAGES. Folder describes equipment for feeding, filling, forming, sealing unit-packages for tablets, textiles, food items. Wrap-Ade Machine Company, Inc. (F-779)

SEALING AND LABELING MACHINE. Bulletin explains features and operation of "Vacumatic" heat sealing and labeling machine which feeds, folds, and seals labels and bags in one operation. Mercury Heat Sealing Equipment Co. (F-780)

LABEL MARKER. Bulletin illustrates and describes unit that marks prices, code numbers on company's sew-in, gummed, or pressure-sensitive labels. Soabar Company, Inc. (F-781)

AEROSOL PACKAGING. 12-page brochure illustrates how aerosols work, and explains the functions of propellants. Suggests products suitable for aerosol packaging, and describes properties of company's wide range of propellants. Allied Chemical & Dye Corp. (F-782)

CASE PACKER-SEALER. Illustrated literature describes automatic machine that opens and forms cases, accumulates contents, inserts, glues and seals. Machine occupies a space approximately 16 ft. in length and 30 in. in width. Schroeder Machines Corp. (F-783)

TRANSPARENT PLASTIC PACKAGES. Folder describes "blister", tray, box insert, partition, slide cover pack, and sleeve packages custom formed by this Illinois company. Plastofilm, Inc. (F-784)

SLITTER-REWINDER. Folder illustrates and describes slitter-rewinder for film, foil, tape, paper. Suitable for score cut slitting, razor blade slitting, burst cut slitting. Illustrates principal working part. John Dusenbery Company, Inc. (F-785)

PRESSURE-SENSITIVE STRAPPING TAPE. Booklet describes reinforced vinyl tape for palletizing and unitizing, holding and bundling, reinforcing. Describes applications and includes specifications. Johns Manville, Dutch Brand Div. (F-786)

FLOCKED PAPER SAMPLE. Sample folder shows swatches of flocked paper available in several colors in stock sizes and rolls from this company. Vertipile, Inc. (F-787)

PRINTING INKS. Folder describes ink service for lithography, letterpress, flexography, gravure. Customer retains stock supply on hand and prepares ink from compounding information provided by company. Crescent Ink & Color Co. (F-788)

AUTOMATIC CARTONING LINE. 8-page booklet describes features of a fully automatic constant motion cartoner. Also illustrates carton feeding and opening process. R. A. Jones & Co. (F-789)

CONVEYOR CATALOG. 32-page catalog contains illustrations of applications, descriptions, diagrams and specifications for extensive line of gravity and power conveyor units. Standard Conveyor Company. (F-790)

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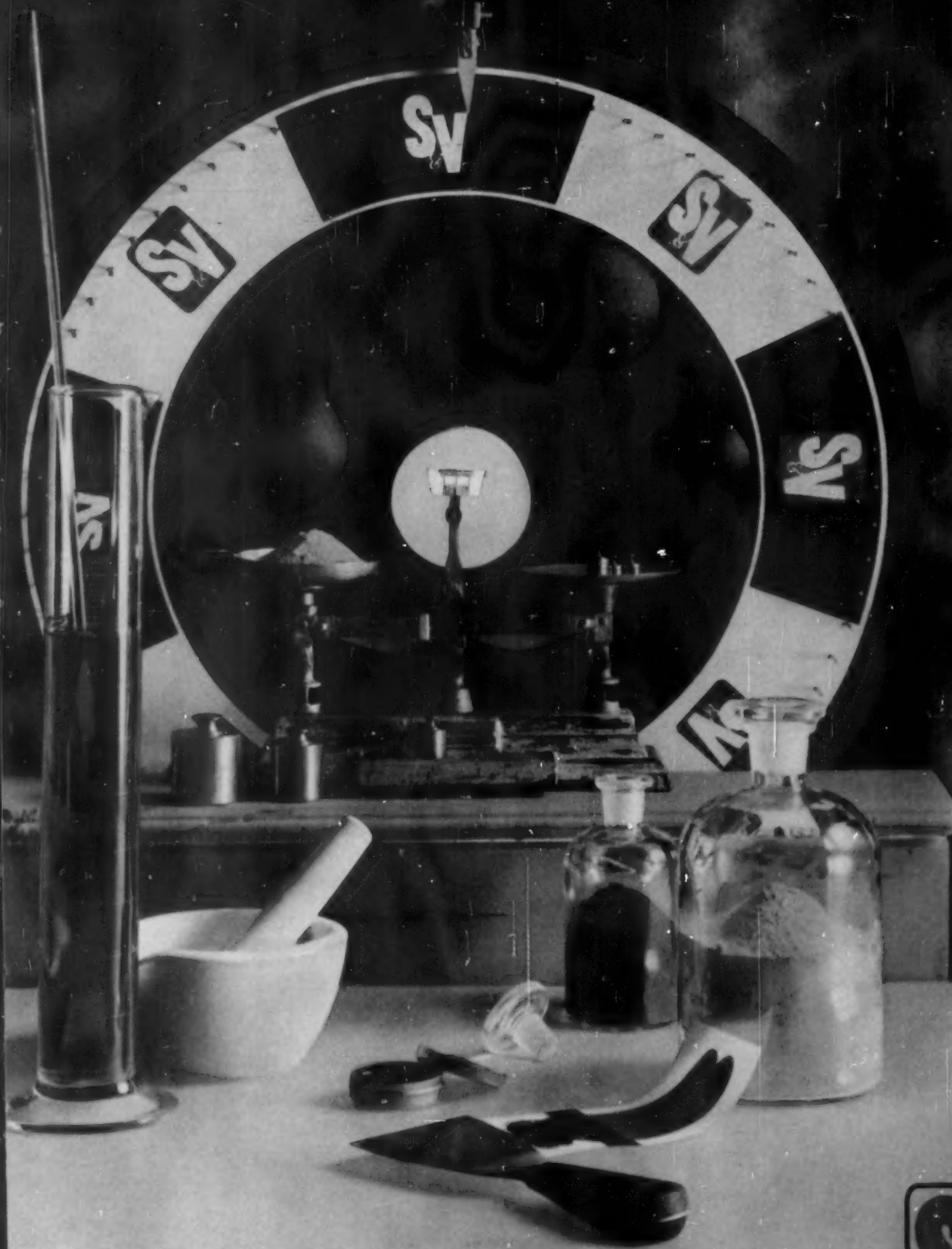
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U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps not accepted. Edited by H. A. Levey.

Method and Apparatus for Packing Filled Bags Within Bales, Harold L. Wolven (to St. Regis Paper Co., New York, N.Y.). U.S. 2,783,598, March 5. The method for filling a plurality of bags into a bale, said bags being filled with pulverulent material and initially being of substantially rectangular transverse cross-sectional shape.

Handled Open-End Can Carton, Jay D. Crary, et al. (to Paper Strap, Inc., Portland, Ore.). U.S. 2,783,690, March 5. A method of manufacturing a container comprising forming a container blank having an end wall and opposite side walls hingedly connected together along parallel fold lines.

Covered Package With Initially Sealed, but Releasable Closure Flap, Lloyd I. Volckening, et al. (to Ivers-Lee Co., Newark, N.J.). U.S. 2,783,877, March 5. A package comprising an approximately flat commodity container having two opposed walls with outer thermoplastic surfaces.

Dispensers for Sheet Material, Fred C. Traver, Chicago, Ill. U.S. 2,783,878, March 5. A dispenser for sheet material in roll form comprising a continuous seamless, cylindrical, thin, flexible and resilient-walled extruded tube of plastic selected from the group consisting of cellulose acetate, cellulose butyrate and polyethylene.

Method and Apparatus for Packaging Cigarettes and the Like, Lester A. Metz (to Pull-Packaging, Inc., a Pennsylvania corporation). U.S. 2,783,596, March 5. Packaging apparatus comprising an intermittently rotatable rotor including a series of hollow formers having predetermined stopping places; also a method of packaging which comprises feeding a wrapper strip and a pull strip.

Closures for Glass Containers and Method of Application, John Hohl, et al. (to Owens-Illinois Glass Co., Toledo, Ohio). U.S. 2,783,597, March 5. In the method of hermetically sealing a glass container having a continuous top-sealing surface with a sheet metal closure, the steps of bringing the sealing film into contact with the top sealing surface.

Method of Packaging, Roy J. Weikert (to General Films, Inc., Covington, Ohio). U.S. 2,783,599, March 5. A method of packaging irregularly shaped foodstuffs and the like wherein the surface thereof is substantially straight in at least one direction and comprising the steps of positioning the foodstuffs in a heat-deformable, open-end plastic bag-like container.

Wrapping Machine, Neal R. Olson (to Speed Wrap, Inc., Denver, Colo.). U.S.

2,783,600, March 5. In a package wrapping machine, the combination of: a frame providing longitudinal support upon which a package can be placed, primary tucker means, means for adjusting tucker elements, means to reciprocate simultaneously both tucker elements along said support, secondary tucker means, primary folding means and secondary folding means.

Closures for Bottles, Vials and the Like, John Leslie Winfield (to Glaxo Laboratories, Ltd., Greenford, Eng.). U.S. 2,783,908, March 5. A sealed container comprising a moisture-imperious container, an outwardly facing annular shoulder in said container, a stopper in said open end and seated on said shoulder.

Stopper for Ampoules and the Like, Charles Buford Roberts, Sparta, Tenn. U.S. 2,783,909, March 5. A stopper of elastic material having a projection on its lower face and having an annular cut extending downwardly from its upper face.

Corner Fastener for Collapsible Wire Crate, Harold B. Bussing (to Union Steel Products Co., Albion, Mich.). U.S. 2,783,911, March 5. In a crate including a bottom and side walls, a bolt slidable and rotatably supported in support eyes, and a U-shaped handle having inward offsets at the ends of its arms secured to the bolt.

Stacking and Nesting Containers, James M. Gordon, Los Angeles, Calif. U.S. 2,783,915, March 5. An expansible container for food and other products comprising: a substantially rectangular, planar base, side members and end members extending upwardly from the side and end edges of the base and defining a substantially rectangular open top.

Carrying Carton, Armand Hodapp (to Chicago Carton Co., Chicago, Ill.). U.S. 2,783,916, March 5. A collapsible carrying carton formed from a single sheet of paperboard material comprising a bottom wall, opposed side walls foldably connected to said bottom wall along opposite edges thereof, opposed end walls, a central multi-ply partition wall intermediate and paralleling said wall, a two-ply handle, a cover flap and a locking member extending from the lower edge of said partition wall.

Cigarette Carton, Patrick P. Delaney, Ironton, Ohio. U.S. 2,783,929, March 5. A cigarette carton of flat sheet material comprising a bottom, a pair of spaced front and rear walls carried by said bottom, end walls carried by said bottom, a filler carried by said front wall and disposed within the carton adjacent said front wall.

Fibreboard End Structures for Shipping Boxes, Melvin A. Riley (to Baltimore Paper Box Co., Baltimore, Md.). U.S. 2,783,930, March 5. A fibreboard base structure for a shipping box comprising a rectangular-shaped panel, a pad car, a plurality of flaps and a plurality of fibreboard laminations.

Foldable Carton, John Golden, Pittsburgh, Pa. U.S. 2,783,931, March 5. A foldable carton comprising a pair of oppositely positioned members, each of which is folded to form foldable panel-like areas that serve as a side wall, bottom wall and top wall for the carton.

Containers Having Flap Hold-Down Means, Earl L. Sharts (to Eddy Paper Corp., Chicago, Ill.). U.S. 2,783,933, March 5. A knocked-down carton having foldably connected a plurality of main body panels.

Bulk Tube Carton, Kenner S. Omer, Jr. (to General Electric Co., New York, N.Y.). U.S. 2,784,839, March 12. In combination, a plurality of articles and a carton for bulk packaging said articles comprising: a container unit being substantially U-shaped in cross-section and a plurality of main sections hingedly connected, adapted for holding said articles in suspended positions, and a separate cover unit.

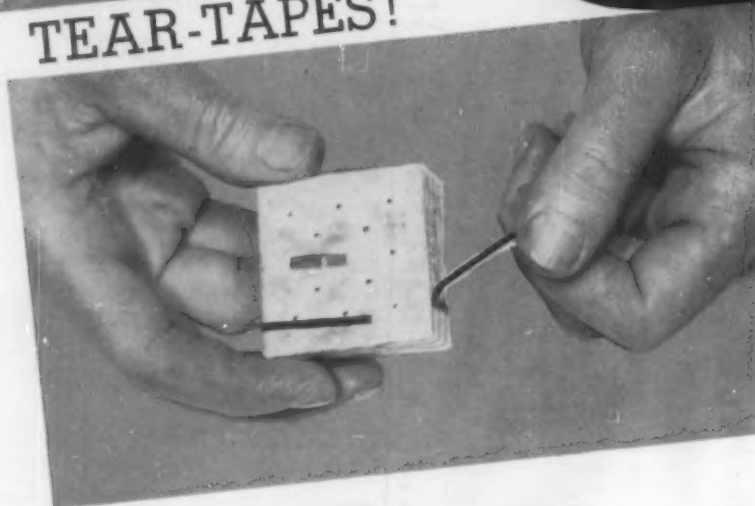
Diaphragm Sealed Vent for Containers, Glenn E. Rieke (to Rieke Metal Products Corp., Auburn, Ind.). U.S. 2,784,865, March 12. A vent unit for containers having an opening and surrounding collar comprising an axially bored, internally threaded plug of compressible material closed by a severable diaphragm at its inner end.

Container With Sanitary End Closure, Howard M. Hill (to American Can Co., New York, N.Y.). U.S. 2,784,893, March 12. A container for liquids, comprising a tubular fibre body of substantially square cross section and a flat top closure of integral triple thickness secured thereto in a laterally projecting end seam.

Container With Sanitary End Closure, Howard M. Hill (to American Can Co., New York, N.Y.). U.S. 2,784,894, March 12. A fibre container for liquids, comprising a tubular body of rectangular cross-section and a flat rectangular top closure of double thickness adhesively secured thereto in a laterally projecting end seam.

Packet Container, Roderick W. Hoag, Melrose, Mass. U.S. 2,784,896, March 12. A container for pulverulent material, comprising a base blank of flat material of a predetermined height and width, a second blank of normally greater width but of less height than the base blank,

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U.S. patents digest

said second blank having a semi-cylindrical pocket formed thereon.

Egg Container, Aron Braunstein, Brownsville, Tex. U.S. 2,784,897, March 12. An egg container comprising an interior filler section and an outer shell section surrounding said filler section.

Storage and Shipping Receptacle, N. Russell Cronquist, Yonkers, N.Y. U.S. 2,784,899, March 12. A receptacle having a bottom, sides and ends, and a top member having an upper section extending from one end along and between the upper edges of said sides towards the opposite end of said receptacle.

End Closure for Container, Isaac L. Wilcox (to Oswego Falls Corp., Fulton, N.Y.). U.S. 2,784,901, March 12. An end closure for a container having a substantially tubular container body.

Method of Improving the Adhesion of Synthetic Sausage Casings to the Filling, Richard Weingand, Walsrode, Germany. U.S. 2,785,074, March 12. A method of improving the adhesion to its content of a synthetic sausage casing made from alginates by precipitation.

Art of Producing Lip-Type Bags, Clyde K. Billeb (to Milprint, Inc., Milwaukee, Wis.). U.S. 2,785,609, March 19. The method of producing lip-type bags which comprises longitudinally advancing a web of this flexible sheet material, folding side portions of the advancing web upwardly and inwardly along laterally spaced longitudinal lines with the longitudinal edges of the web in overlapping relation, thereby to form a continuous flat tube.

Apparatus for Assembling, Impregnating and Delivering Containers of Paper, Cardboard or the Like Carton-Forming Material, Gunther Meyer-Jagenberg, et al. (to Jagenberg-Werke Akt.-Ges., Dusseldorf, Germany.). U.S. 2,785,610, March 19. Apparatus for producing, impregnating, cooling and delivering containers comprising at least two feed mechanisms.

Apparatus for Heat Sealing, John D. Conti (to American Viscose Corp., Philadelphia, Pa.). U.S. 2,785,611, March 19. An apparatus for closing and sealing a carton end comprising means for guiding a carton having flaps into a heat-sealing station.

Glass Containers for Alcoholic Beverages, Paul L. Magill, Menlo Park, Calif. U.S. 2,785,985, March 19. A non-dripping glass bottle filled with alcoholic beverage having a film of hardened polysiloxane resin only on and surrounding the outer surface of the mouth thereof restricted to the external area about the mouth of said bottle.

Plastic Bag, Richard H. Wikle, Atlanta, Ga. U.S. 2,785,720, March 19. In an imperforate bag, a wall made of plastic sheet material, said sheet having a substantially rectangular, smooth, relatively

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STOCK PLASTIC CONTAINERS. Illustrated catalog describes, gives dimensions of line of rigid plastic containers, including boxes, trays, and jars available clear or in colors. Also shows formed acetate domes and slide cover boxes. Oppenheim Co. (F-751)

HEAVY-DUTY CORRUGATED CONTAINERS. Folder contains diagrams of representative types of container with triple rows of fluting said to withstand compressive loads up to 1000 lbs. per lineal foot. Tri-Wall Containers, Inc. (F-756)

PAPERBOARD SAMPLES. Folder contains samples of company's printed, white, wood grained, tinted kraft board. Contains price list. Southern Special Products Corporation. (F-760)

MULTI-COLOR PRINTING PRESS. Folder describes press available in one-, two-, or three-color models that prints letterpress, or offset on flat, round, raised or recessed articles. Cosom Engineering Corporation. (F-761)

METAL CANISTERS. Literature contains illustrations of decorative metal canisters embossed with porcelain-like design and suitable for packaging products such as cookies, tea, candy, bath salts, soap, powder. Includes prices. The Daher Company, Inc. (F-776)

UNIT PACKAGES. Folder describes equipment for feeding, filling, forming, sealing unit-packages for tablets, textiles, food items. Wrap-Ade Machine Company, Inc. (F-779)

Just turn to the Manufacturers' Literature page in this issue (it's printed on heavy paper), circle the numbers corresponding to the booklets you want, fill in the reply postcard, and mail. No postage needed.

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U.S. patents digest

thick border portion and an interior portion.

Shockproof Package, Earle R. Ryno, East Orange, N.J., et al. (to Merle M. Hoover). U.S. 2,785,795, March 19. A shock-resisting container comprising a shell, a flexible open-ended tubular bag within said shell for holding an article to be packaged.

Beam Structures and Collapsible Containers Made Thereof, Walther Zarges, Marnau, Germany. U.S. 2,785,823, March 19. A collapsible container comprising a substantially rectangular base and side walls pivotally connected to said base comprising four beams connected to each other at their ends to form a frame.

Container Closure, John F. Reeves, Green Village, N.J. U.S. 2,785,824, March 19. An assembly comprising an open-end container having an external flange at its end, a skirted cover adapted to be placed over the container end, a normally flat, when deflated, inflatable tube bonded to and around the inner wall of said skirt and embracing the container body.

Bottle Carrier, Homer W. Forrer (to Atlanta Paper Co., Atlanta, Ga.). U.S. 2,785,827, March 19. A collapsible carrier for bottles and other similar containers comprising a bottom-wall panel, opposed side-wall panels, a handle portion for said carrier and opposed pairs of end panels extending from said side-wall panels to said handle portion.

Fitting Closure, Laverne W. Bilderback (to ACF Industries, Inc., a corporation of New Jersey). U.S. 2,785,829, March 19. In a closure for a pressure fitting or the like, the combination of a fitting provided with a tapered aperture therein and having an external skirt portion extending coaxially beyond said aperture, a tapered plug for closing said aperture.

Lined Frozen-Food Boxes, Richard C. Stenger (to Baljak Corp., Wilmington, Del.). U.S. 2,785,845, March 19. A lined folding box, particularly for the packaging of frozen foods, consisting of a box blank and a liner.

Can-Carrying Carton, Morris Weiner (to Pizer Container Corp., Philadelphia, Pa.). U.S. 2,785,846, March 19. A blank for a can-carrying receptacle comprising a central substantially rectangular panel having spaced transverse fold lines dividing the same into alternate side and end panels.

Paperboard Carrier Carton, Homer W. Forrer (to Atlanta Paper Co., Atlanta, Ga.). U.S. 2,785,847, March 19. A blank for a paperboard carrier carton comprising a first wall panel, a pair of wall panels foldably joined in series with said first wall panel at opposite edges thereof.

Method and Apparatus for Forming Seams of Thermoplastic Material, Alan

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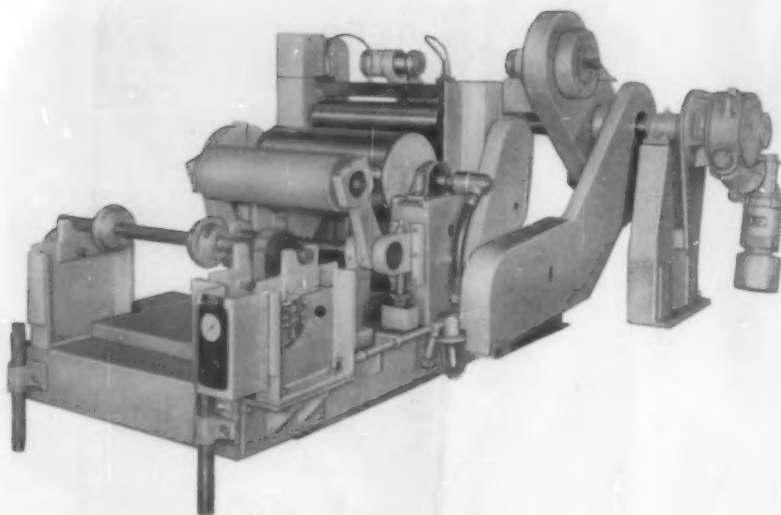
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U.S. patents digest

A. Reid (to General Mills, Inc., a corporation of Delaware). U.S. 2,786,511, March 26. An apparatus and method of forming a uniform, gastight, stress-resistant seam between layers of thermoplastic material.

Paperboard Carrier for Cans, Hermond G. Gentry (to Atlanta Paper Co., a corporation of Georgia). U.S. 2,786,572, March 26. A package of cylindrical objects, such as cans, said package comprising a four-sided wrapper with open ends and tabs to retain said cylindrical objects.

Non-Refillable Bottles, George K. Laham, Roslindale, Mass. U.S. 2,786,592, March 26. A non-refillable bottle having an outflow opening at one end which is controlled by a tapered valve.

Closure for Containers, Paul Nofer, Brunsbuettelkoog, Germany. U.S. 2,786,593, March 26. A closure for the opening of a container comprising a beaded neck on the container, a lid portion and a vertically depending skirt portion deformable to fit the lip on said container.

Closure for Bottles and Like Containers, Henri Rigolot, Courbiac-Saintes, France. U.S. 2,786,594, March 26. A closure for bottles and like containers having a neck terminating in a discharge mouth, said closure being formed of a molded synthetic elastomeric plastic.

Closure Means for Box Lids, Arthur Claud-Mantle (to The Bassick Co., a corporation of Connecticut). U.S. 2,786,596, March 26. In a box structure having a body and a lid approachable toward each other in a straight line, a keeper plate applied to said lid to secure it.

Container for Beverages, Ernest H. Benson, Kansas City, Mo. U.S. 2,786,597, March 26. A metal container of the type having a neck adapted to receive a pressure-applied cap, said container comprising a substantially cylindrical hollow body having closed ends.

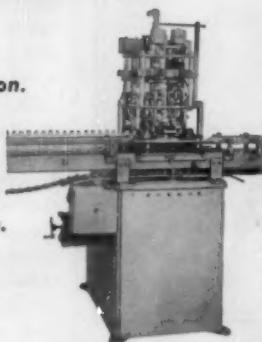
Cartons, David Levkoff, Great Neck, N.Y. U.S. 2,786,621, March 26. A carton of the character described having a bottom, side walls and double-thickness end walls, one of the plies of each end wall being provided with an extension directed inwardly toward the opposite end wall.

Multi-ply Paper Sacks, Rupert C. Ross (to Medway Paper Sacks, Ltd., London, England). U.S. 2,786,622, March 26. An article forming one ply of a multi-ply paper sack, comprising: a paper sheet coated on one side only with a layer of thermoplastic waterproofing substance.

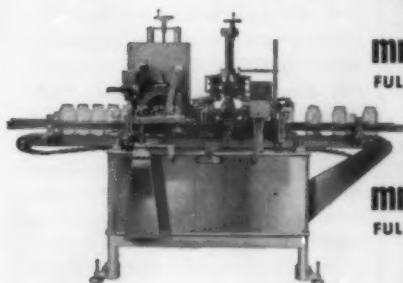
Valve Bag, Richard A. Port (to Olin Mathieson Chemical Corp., a corporation of Virginia). U.S. 2,786,623, March 26. A valve bag comprising a body portion formed of at least three flattened tubes gusseted at their sides.

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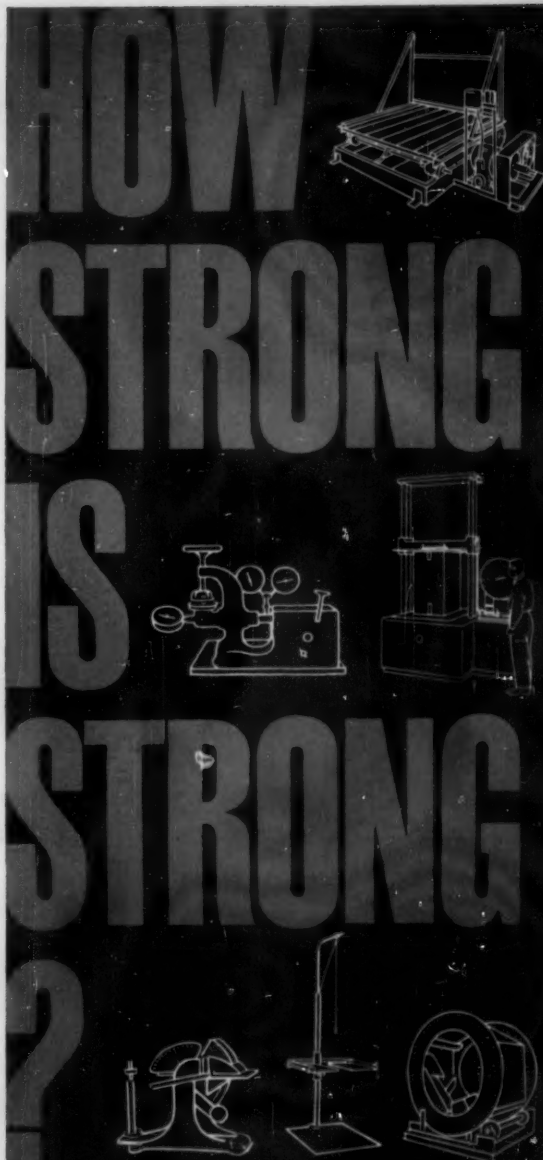
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Boxed bananas

[Continued from page 111]

placed neatly side by side in the trays to provide a visible count and an attractive appearance. A large, clear area in the automatically applied cellophane wrap gives the shopper a full view of the fruit.

A background of green contrasts nicely with the yellow color of the fruit. The brand name, "Flav-O-Ripe," is printed in red on a yellow panel at the top, while a silhouette of a banana being peeled and sliced on a plate provides full-color pictorial interest.

The entire back panel is devoted to copy giving the company's reasons why "Packaged bananas are better," with the pledge that "we will pack only first quality bananas in this package."

One side panel is designed to do an educational job. Under a caption, "Suit the color to the use," consumers are given printed information on when to use bananas. They are told that when tipped with green, a banana is partially ripe, but right for baking or broiling. When all yellow, it is ready to eat and cook. When flecked with brown it is fully ripe and at its best for eating, infant feeding and "sweet and mel-low for fruit cups, salads, milk shakes and desserts."

Although the Long Island Banana Co. is not the first to package bananas, it apparently is the pioneer in its distribution area with a method that puts it in an enviable position to win new markets in a field that is extremely competitive and greatly restricted as to profit margins by prevailing prices on fruit importations.

Film packages

[Continued from page 117]

that cellophane has a sparkling future elsewhere. It will probably remain the No. 1 film for some years to come. Production capacity is being pushed toward a 600-million-pounds-a-year mark by the three producers.

Converters are optimistic about cellophane since increased supply will permit the tapping of markets that have been neglected throughout the postwar shortage period. Polymer coatings will permit cellophane

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to compete in protective functions that it previously couldn't touch.

Polyethylene is growing equally fast and current developments promise to accelerate it. The problem of setting definite quality standards for polyethylene may be solved within the next year when the U. S. Bureau of Standards publishes recommendations of an industry committee formed by the Society of the Plastics Industry. This will help the film-converting industry, which has had to fight price cutting and quality shaving within its own ranks.

The "new" polyethylenes offer exciting possibilities and also a major headache in coming up with terminology that will be understood by packagers. It is apparent that there will be many more varieties of polyethylene and meaningful designations are needed.

The new polyethylenes have been called low pressure, high density, linear or polyolefins to contrast them with conventional, high-pressure or low-density polyethylenes. To add to the confusion there are intermediate-density polyethylenes which are produced from high-pressure resins.

No matter what the name, the new polyethylenes have new properties—including boilability and rigidity—that will find wide packaging interest. However, new formulations are a "give and take" proposition; an advantage may be counterbalanced by a disadvantage. No converter is going to be able to furnish a packager with any one miracle film that will solve all packaging problems.

Technically a member of the polyolefin family, polyethylene has a cousin in the laboratory that may turn out to be a rich relation: polypropylene. This new resin, developed in Italy, will probably take another three years to move into the converter's plant. It is said to have cost, boilability and protective characteristics that will make it a stout competitor of some polyethylenes.

Stirring greatest current interest are the tough polyester films. Heat-sealability, this film superman's original drawback, has been solved by the producer of the original polyester film, which is now becoming available with a thin polymer coating, and a second producer has announced a heat-sealable polyester film. It's no secret that other film

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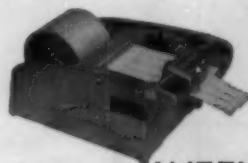
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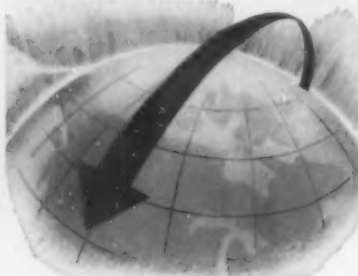
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producers are looking at polyesters, with one or two privately admitting they have such films in the laboratory, but three to five years away from the market. A cost drop such as has been experienced by polyethylene would make the currently expensive polyester films a stiff market competitor—especially in view of the fact that, because of its great strength, polyester can be used as thin as one-half or even one-quarter mil.

Polyvinyl alcohol film, which dissolves in water, appears to have new improvements that will for the first time make it commercially practical. Specific applications of PVA are scheduled to move into stores by the end of the year.

Polystyrene film is available now, although most packaging applications of this material have been in the heavier sheet gauges. Its potential low cost could make this an attractive material.

Nylon film is among the materials still upstream. While it's markedly permeable to water vapor, it has low oxygen permeability, is very tough

and has good resistance to hydrocarbons. The latter quality may make it possible to package oils, where polyethylene has failed. It is a good bet that the nylon film which will reach the market will be heat sealable.

A vapor-phase inhibitive coating to retard oxidation of food products has been developed for application on cellophane and other films and reportedly has received FDA approval. The coating is said to increase shelf life six-fold for such fatty products as potato chips. Similar anti-oxidant chemicals already have been used in folding carton-board.⁵

The increasing complexity and variety of possible or existing film types is putting a greater load of responsibility on the converter to give sound technical advice to his customer. With so many possible alternate roads to travel, the successful film-package supplier today must be more than just a printer or bag maker.

⁵See "Anti-Oxidant Food Board," MODERN PACKAGING, Jan., 1956, p. 118, and "Use of Anti-oxidants in Paperboard," July, 1956, p. 119.

New force for glassware

[Continued from page 133]

struction, usually planned for year-round selling rather than with seasonal motifs.

The tumblers are held in place in die-cut platforms in the box bases. An effective means of setting off patterns to better advantage has been devised by printing the slotted area or "tongue" that appears inside each glass in a color contrasting to the white of the platform. This shows up designs in clear glass which do not show up so well against white.

This same idea has been carried out even further in a handsome gift box containing a pair of hurricane lamps. In this case the platform slots have been printed with color illustrations of lighted candles. When the hurricane lamps are placed in the slots, pictures of the candles show through the lamps, quickly conveying to the shopper the idea of their use.

The principle of the carry carton, so effective in other packaging fields, has been adapted extensively to the packaging of popular-priced sets of tumblers. The cartons are of spe-

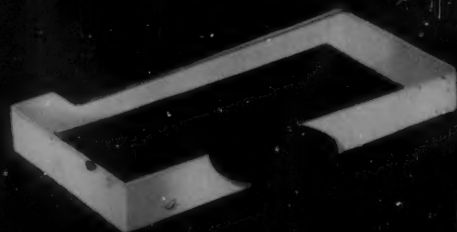
cial die-cut construction to hold, usually, four glasses—a preferred consumer unit today—and have handles that fold down when the packages are stacked for mass display. Retailers like these packages for their effectiveness in display and their ease of handling by store personnel and customers.

Even kitchen glassware is now packaged in stepped-up corrugated containers with brilliant color appeal for mass display.

Anchor Hocking also has given much attention to the preparation of illustrative material and copy to identify the contents of every package. Each one states and often actually illustrates contents so that the shopper, unassisted by a salesperson, can tell instantly what's in it. A gift box for ash trays, for example, will state clearly on the cover: "Set of three ash trays by Anchorglass."

The Christmas line of Anchorglass tableware is being introduced currently to the trade and the company reports that it is ready for the biggest selling season with the largest line of packaged items in its history.

FOOD PACKAGING



AMERICAN

THE AMERICAN PAN DIVISION
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J

Ethical goes popular

[Continued from page 108]

methods and packaging division was responsible for determining protective characteristics of the packages on which the new design was to be used and for making sure of the compatibility of all containers with the products they contain. Required label data as well as information from the sales department concerning the forms of issue and package size had to be approved. Dummy cartons and packers received from suppliers were processed through the production department for approval on size and for handling on existing packaging machinery. Finally, specifications were written for all package components. At this point, methods and packaging worked closely with the graphics section on the layout for labeling and carton design. After labeling copy was processed through production planning, all printing was finally checked for copy and design accuracy.

There were minor variations in the packaging that finally appeared.

The Privine and PBZ (Pyribenzamine) nebulizers are packaged in a tray box with a transparent acetate slide sleeve. This enables the purchaser to see the shape of the nebulizer, which is convenient to carry in a pocket or purse.

The Nupercainal cream and ointment are packaged in collapsible tubes enclosed in regular tuck-flap folding cartons. However, to distinguish the cream from the ointment, the product logo, "Nupercainal," on the cream package is printed in red, instead of in blue and the product identification, "Cream," in black, with the Ciba logo in blue. On the ointment package, the trade name, "Nupercainal," is printed in blue with the identification, "anesthetic ointment," in red. Both packages have white backgrounds.

Another interesting package is a thermoformed high-impact polystyrene tray and polystyrene slide to hold cellophane-wrapped Nupercainal suppositories in an aluminum-foil bed. Adaptability of the new design to this package illustrates its versatility for almost any package medium.

Choice of the Antivy package was a little more complicated, since the product is a new one. A container

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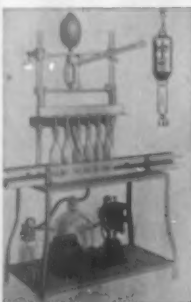
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had to be selected that would be compatible with the drug and keep it stable. It also had to have the proper type of opening to prevent clogging and a cap that would not stick or have a liner which would flake off into the bottle.

An opaque, polyethylene squeeze bottle with a flat dispensing-plug insert and screw-type cap with vinyl liner was chosen. The committee felt a translucent bottle would not have esthetic appeal, since the lotion clinging to the inside of the container might be unsightly. It also felt that with a nipple type of dispenser the solution might eventually clog the orifice. An oval bottle was selected because of easier handling.

Size was another factor. The Antivy bottle had to be sufficiently large to meet competition, yet not too large to be unwieldy after allowance for "shake room." The 90-ml. (3 oz.) size originally suggested, filled with only 80 ml. of the product, was selected.

Three type faces were used on the

milky white background of the Antivy container: Swiss Grotesque for the product logo, Venuslite Extended for the product identification and the word "lotion," and light line Gothic for the mandatory and descriptive information. The Ciba logo in the red vertical rectangle was placed above and to the right of the product name.

The Antivy squeeze bottle is not put in individual cartons, but serves as its own display, both individually and in a three-step paperboard container display with riser carrying a cartoon drawing of a poison-ivy sufferer, with copy reading: "Antivy—double action against poison ivy, oak, sumac."

The entire project, from the first committee meeting until the final implementation of its decisions, took a little more than one year. The result, in Mr. Haine's words, has been the development of packaging "with consumer appeal, yet maintaining the dignity and professional reputation of Ciba."

Saran-coated films for packaging

[Continued from page 156]

these is grease and oil protection.

Table X shows the number of days to permeation of one of each of the three types of oils in an accelerated test (140 deg. F.) comparing saran-coated and nitrocellulose-coated cellophane. This added measure of protection has resulted in this film being widely used for packaging baked goods, nuts, meats, potato chips and similar items.

Excellent abrasion resistance is another property of saran resins. This gives an improved cellophane coating for the packaging of hard products such as candy, cookies, potato chips, noodles, nut meats, dried fruit, etc.

An extra measure of clarity is another characteristic which the packaging trade has learned to associate with saran-coated cellophane. It can be handled on regular bag-making, overwrapping, filling and forming machines with excellent results when suitable machine and temperature adjustments are made. Heat sealing is excellent, though generally higher temperatures are needed than for nitrocellulose coatings. The quality of the printed film

is excellent, with flexographic printing generally considered most satisfactory.

Saran-coated polyester film

The tough new polyester films are rapidly gaining an important place in the packaging field. Because of the very high tensile strength of these films, principal packaging uses to date have been for heavy or bulky items such as hardware, cutlery, toys, heavy textile items and some foods. Polyester is also used as windows in boxes because of its clarity, strength and dimensional stability.

The development of saran-coated polyester promises greatly to extend the uses for this film. Combining the strength, thermal stability, clarity, dimensional stability, generally good barrier properties and excellent machine-handling qualities of polyester with the added barrier and heat-sealability properties of saran results in a unique and useful packaging product. Hard or heavy food products which demand moisture and gas control will benefit from this combination. Hams and large

cheeses, hard candy, dried fruits and cookies are but a few such products. Drum liners for liquids and chemicals are another potentially large use for these films.

The improvements in barrier properties of saran-coated polyester compared with uncoated polyester are shown in Table XI. Especially significant are the gas resistances. As with saran-coated polyethylene, the excellent resistance of saran-coated polyester makes it an ideal package for processed meat and cheese. Taste and odor stability of packaged foods of all types are also greatly improved.

Table XI shows that the moisture transmission rate of saran-coated polyester is reduced three to six fold over the uncoated film, depending upon the particular saran resin used. Hard, hygroscopic food items are thus protected over extended storage periods.

Oil resistance of polyester is improved with a saran coating, as is shown in Table XII. This test was accelerated at 140 deg. F.

One of the factors which has limited the use of polyester film in packaging has been its lack of heat sealability. A solvent-sealing technique employing benzyl alcohol was recently introduced and is reported quite successful (8). Saran-coated polyester can be sealed by conventional techniques and combines this heat sealability with the added barrier properties already mentioned.

Attracting a great deal of interest in food marketing circles are boil-in-the-bag pouches for certain frozen foods: stews, shrimp, potatoes, spaghetti and meat balls, and corn on the cob are but a few of the foods which have been or can be packaged in this convenient manner.

Standard package construction to date has been either laminated or extruded polyethylene (for heat sealability) on polyester (for durability). While this combination has proved satisfactory, the introduction of a saran coating into the construction provides added protection. The saran coating, preferably between the polyester and the polyethylene, assures retention of food flavors during storage and cooking.

This same construction, polyester/saran/polyethylene is also being developed as a premium-quality package for vacuum packaging of processed meats and cheeses. The

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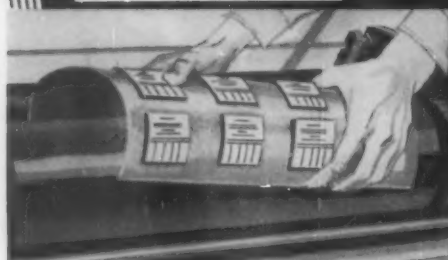
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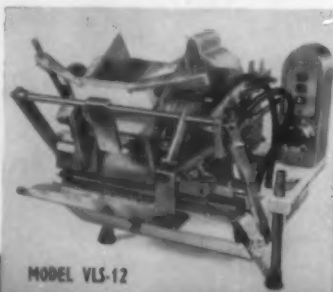
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saran portion of this "sandwich" provides oxygen protection and vacuum retention.

Summary

The tremendous growth in packaging in recent years has placed increasingly greater demands on the packages themselves from both the functional and appearance standpoints. The art of combining two or more packaging media to achieve desired sets of properties has risen to meet this challenge. Thin films of saran deposited from solutions of soluble saran lacquer resins are proving to be one of the most important packaging materials in this development.

These films are characterized by:

1. Extremely low gas permeabilities.
2. Excellent water and water-vapor resistance.
3. Excellent resistance to greases, oils, chemicals and solvents.
4. Clarity and high gloss.
5. Heat sealability.
6. Receptiveness to printing.
7. Abrasion resistance.
8. Freedom from taste, odor and toxicity.
9. Freedom from tack.

They can be easily and inexpensively applied at high speeds to many base stocks by a number of coating techniques common to the converting industry. Figure 3 summarizes the improvements which these coatings provide to a number of common flexible transparent packaging films.

Other packaging materials which can be upgraded with saran resins are paper, foil and glassine. Of particular interest at the present time, because of widespread usage or extensive development work, are saran-coated polyethylene, cellophane and polyester.

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Magnetic conveyor

A constant supply of caps for jars of French's mustard is magnetically transported almost vertically up and over a high moving conveyor line of the Rochester, N. Y., plant of the R. T. French Co. On reaching the



top of the conveyor line, the caps are then automatically released into the hopper of a capping machine, ready for application to jars.

This magnetic automation unit is reported by the company to save both time and labor, and also to promote employee safety.

This 16-ft. elevator-conveyor, illustrated above, is equipped with stationary elements of non-electric magnetic rails behind a continuous conveyor belt. The new installation maintains a permanently powerful magnetic field over the entire working surface of the belt, which feeds itself automatically from a large hopper at the intake end of the production line.

The new magnetic conveyor replaced a hand operation at the French plant which required the operator to slide cartons full of jar caps under the conveyor line, then elevate them to a platform and empty them into the hopper.

Credits: Hi-Powr Magna Rails magnetic unit by the Eriez Mfg. Co., 225 Magnet Dr., Erie, Pa. Capping machine by the Pneumatic Scale Corp., Ltd., 65 Newport Ave., North Quincy 71, Mass.



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Packaging is heir to more ills than the proverbial flesh. What was good, healthy packaging in yesterday's market may be a limping cripple in today's. The trick is to keep your packaging tuned to *today's* market . . . to the research findings that show what makes packaging sell.

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NAPA Containers Committee market report

Prices of packaging materials, except for cans, are being held in line by competition and a slight slackening of demand, according to a recent report by the Containers Committee of the National Assn. of Purchasing Agents. All items were said to be in adequate supply at present, but another round of price increases was predicted if demand or freight rates go up.

High points of the report:

Plastic containers. Improvements in plastics are resulting in new uses. Competition is exceptionally strong and an adequate supply has resulted in some softening in price. Cellophane containers are in tight supply, but some easing has been noted due to new plant production.

Textile containers. Burlap and jute prices have dropped slightly since January. Most buyers believe they will hold at present levels through the second quarter. Cotton should remain steady until Fall, because of the slight seasonal increase in demand, although at the present time some mills have cut off the third shift and others the second.

Metal containers. Prices of metal cans increased 3% in the first quarter, due to the price increase in tinplate—averaging about 3¾%. The current prices are expected to hold until Nov. 1. Inventories of cans are high, due to buying in anticipation

of the price increase. Supplies are adequate and exceed demand for the present.

Paper containers. Current demand for corrugated paper boxes is extremely spotty, with suppliers working on a very low backlog. There has been some evidence of a softening in prices, due to slow demand and the eagerness of some suppliers to break into a new market by cutting prices. Most buyers of folding paper boxes are extremely cost conscious and are attempting to use packages with less paperboard.

Paper bags. Predictions are that the second-quarter production of multiwall bags will be slightly below 1956 and supply backlogs are very low. Indications are that present prices will remain firm for at least all of the second quarter.

Glass containers. Prices have remained firm since the committee's last report. Reports from suppliers indicate that no changes are anticipated for the present. Manufacturers' inventories are rather high, in anticipation that food processors will begin production within the next two months due to excellent growing conditions.

Wood containers. Interest continues in the increased use of pallets, with resultant labor and space savings. Current demand and prices are remaining firm.

The urge to simplify and standardize

[Continued from page 105]

mittee, headed by Henry King, assistant to the executive director of the Super Market Institute, cites such examples of simplifying and standardizing food packages. These are beneficial to the packager, wholesaler and retailer.

Last fall the committee made two general recommendations:

1. There should be fewer retail package sizes.
2. A family design should be used for related company products.

At the present time the committee is considering the appointment of subcommittees to investigate food commodities. Some members feel that by thoroughly probing particular packaging problems and by working with organizations already concerned with such products, more

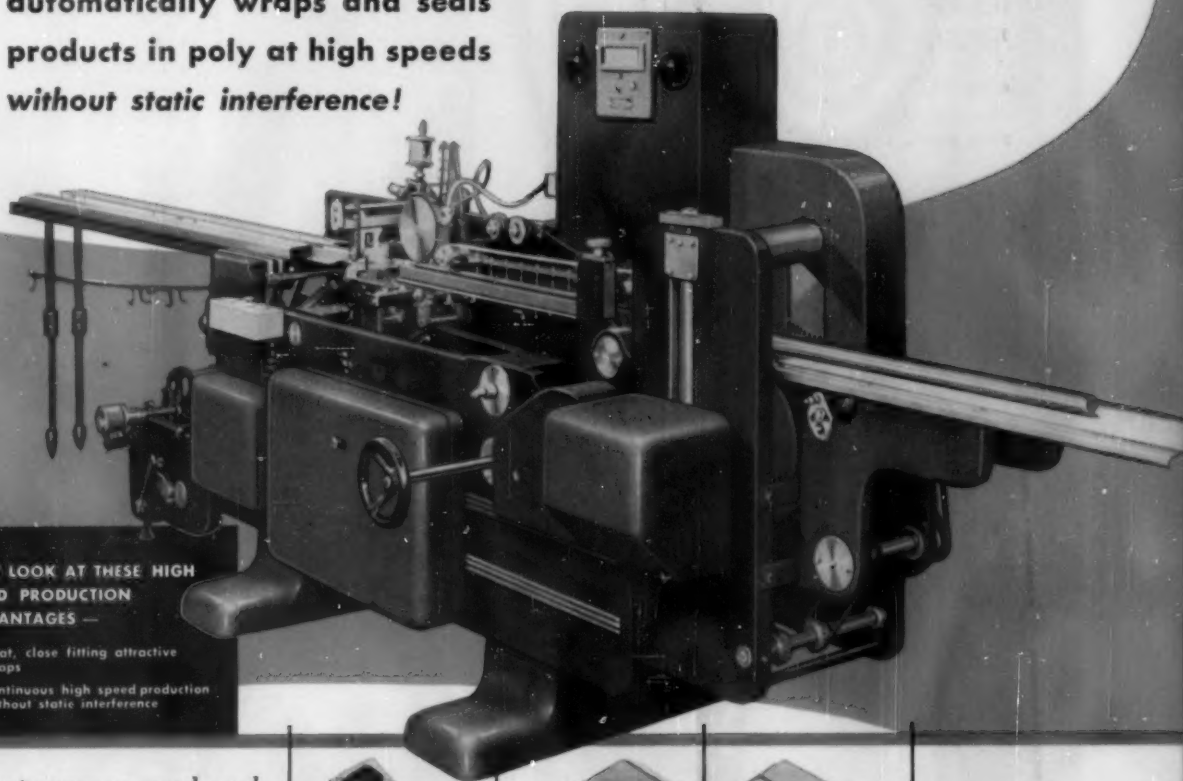
effective work can be done in this area.

If this course is followed, simplification and standardization of retail packages will be a long-range project that may stimulate packagers and interested organizations to seek such measures in their own field.

The Inter-Industry Food Packaging Committee may undertake other projects in the food-packaging field. However, its current three studies appear to be of vital interest to retailers and wholesalers who may be eager to support all such cost-saving recommendations. The man at the sales outlet often has wanted the packager to "think more retail" and this inter-industry organization may effect improvements that will satisfy both the packager and the seller.

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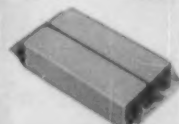
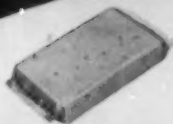
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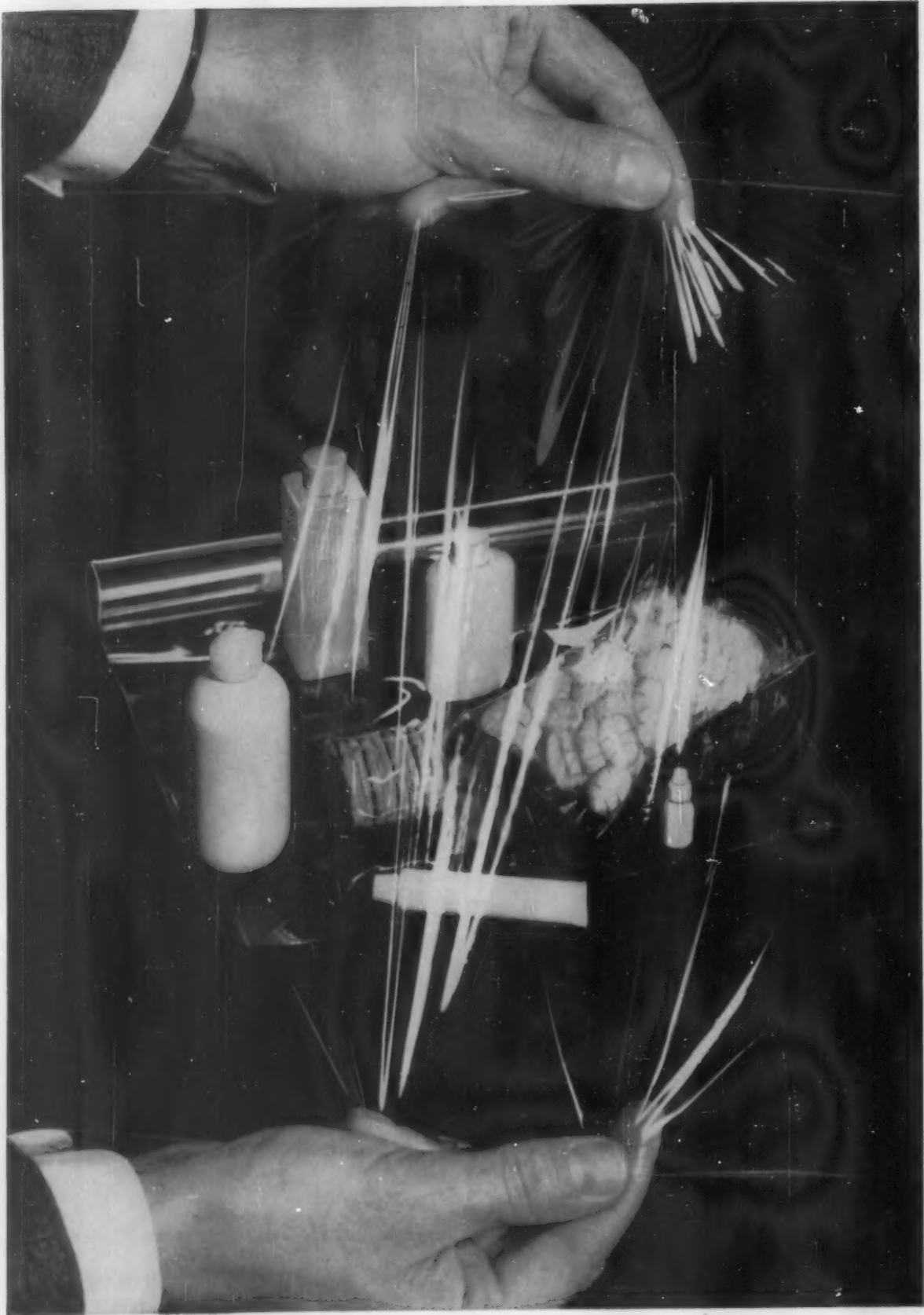
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Packages at 'Design in Chicago Printing' exhibit

The eight packages illustrated below were selected by The Society of Typographic Arts for display in its 30th Annual Exhibition of Design in Chicago Printing.

These packages were among the

In the center left: S. C. Johnson & Son's Johnson's Glade Wax, designed by Bruce Beck and printed by Western Lithography Co.; Sears, Roebuck & Co.'s Finger-Tip Towel carton, designed by James Axeman



102 examples of outstanding printing craftsmanship, chosen from nearly 1,000 entries representing various fields of printing, to receive Certificates of Merit and to be placed on display at The Art Institute of Chicago.

At the upper left (right to left) are: Fin 'n Feather Farm, Inc.'s barn and silo packages, designed and printed by Archie Schrom & Co.; Sears, Roebuck & Co.'s "Bath Set" gift towel box, designed by Nugent-Graham Studio and printed by the Paper Package Co.

and printed by W. C. Ritchie & Co.; Abbott Laboratories' Selsun sampler, designed by Ed Bedno and printed by Acme Box; Helene Curtis Industries' "Go Gay" cartons, designed by Morton Goldsholl and Zeke Ziner, printed by Green Bay Box Co.

Bottom left: Amity Leather Products Co.'s Rolf's carton, designed by Henry Robertz and printed by Wetzel Bros.

At the right: Montgomery Ward & Co.'s paint, oil and brush containers, designed by Dave Chapman.

Survey of soft-goods packaging

More efficient and effective packaging can help soft-goods manufacturers to cope with the demand for increasing numbers of product styles, according to a survey by Harry Lapow, New York packaging consultant.

Querying textile manufacturers who turn out from 20 to 6,000 different product styles a year, the survey showed that six of every seven favored fewer styles. Yet, they agreed almost unanimously that increasing diversity of style, color and size is necessary to meet competition and customer demands.

A handful of manufacturers reported that by standardizing prod-

ucts and improving packaging they had been able to reduce their numbers of product styles while maintaining or boosting sales volume. Two-thirds of the textile makers who have increased product styles in recent years felt their packaging efficiency could be improved.

The survey pointed up the need for more standardization in production and mechanizing of packaging operations.

Packages with more display appeal, gift-wraps for the year-around market and more multiple packages were suggested to help create new markets for soft goods and to exploit present markets more fully.

Food promotion

A special multiple carton for cans and bottles has been designed by the Atlanta Paper Co., Atlanta, Ga., to carry the "Miracle Meals" and "Miracle Marketing" insignia of the "Food Store Spectacular," a nation-



al food promotion to be conducted the week of Sept. 12-21 in more than 100,000 stores across the country. The event, expected to be the biggest packaged promotion in retail food-distribution history, is under the co-sponsorship of the National Assn. of Retail Grocers and *The Saturday Evening Post*.

Contoured rifle sight

[Continued from page 109]

magnifying power. To reduce the possibility of pilferage, the box was made somewhat larger than the scope, which retails for \$45 and up.

For shipment, the display box is put in a corrugated slide, scored and folded to form protective ends when the box is placed in a corrugated sleeve. In the sleeve, a good-sized air space remains between the corrugated material and the box, leaving the blister free of contact with the shipping container. For design continuity, the sleeve, slide ends and end label are also printed in dark red, black and white.

Re-use display value of the box was an unexpected bonus. After the telescopic sight has been removed and mounted on a rifle, some dealers insert a piece of black carbon paper in the blister to simulate a scope, then put it back on display.

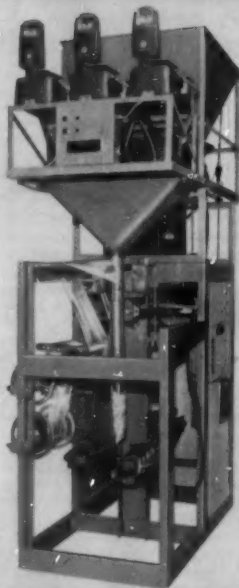
CORRECTION: The moccasin shoe box which won first award in the "Footwear" end-use category of the National Paper Box Mfrs. Assn.'s annual competition (*MODERN PACKAGING*, May, 1957, p. 138) was made by the Frank C. Meyer Co., Inc., for the *Bangor Shoe Co.*

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**PAYS FOR ITSELF
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VERTI-PAK

forms fills seals bags
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LOWEST COST 3-IN-1 MACHINE!

Because of its simplicity of design, Verti-Pak sells for less than any other comparable machine. A most profitable investment for the small as well as larger plant, Verti-Pak should pay for itself in one year or less!

SIMPLIFIED OPERATION!

Only one operator is needed to run this 3-in-1 machine, and his or her time can be divided between two or more machines. Verti-Pak can be set up or changed over in less than four minutes. No skilled mechanic is required.

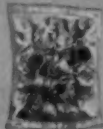
HANDLES POLYETHYLENE EFFICIENTLY!

Verti-Pak makes a strong seal with polyethylene or saran, as well as cellophane or poly-cel. Bags up to 6" wide and 10" long can be made on the regular model. A larger Verti-Pak makes bags up to 7½" wide and 18" long.

PROVEN IN ACTUAL USE!

Verti-Pak is now in successful use in many leading plants throughout the country. One of these installations was the subject of a 2-page editorial story in *Modern Packaging* (March, 1956, Page 196). Names of other users will be supplied on request.

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Verti-Pak is available with auger, volumetric, turret, conveyor and piston feeds for packaging almost any product, and with scales for accurate weighing.

SOME TYPICAL FOOD PRODUCTS

Confections and nuts.
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Used or Resale Equipment

Machinery and Equipment For Sale

FOR SALE: Markem Printing Machine, high production, semi-automatic dial feed. Model 25AD-2C Printer. Suitable for imprinting plastics, paper, cloth, flat packages, products or parts. Immediate delivery. May be tested in operation. Reply Box No. 658, Modern Packaging.

FOR SALE: Aniline Press—4 color—30" web 50 cyl. Repeats from 11" to 29.5, complete cooling unit, 4 pumps, drying units, 7½ H.P. variable drive motor. Write c/o Cel-Flex Converters, Inc. 3513 N. Hovey Street, Indianapolis, Ind.

FOR SALE: Simplex Polyethylene Bag Making Machine. Model 24-7 for tubular stock only, with computing stacker, skip cut attachment and 3 bank hole punch attachments. Handles stock rolls from 3" to 24" in width and makes bags up to 60" long. One year old, in excellent condition and used only on small runs. Price: \$5,500.00. Reply: Manitowoc Paper Box Corp., 525 South 29th Street, Manitowoc, Wisconsin.

FOR SALE: Business liquidated and equipment will be sacrificed for quick sale, far below its value. One brand new Battle Creek folding box packaging machine—top and bottom sealers and conveyors, still in original crates. Also one same type machine slightly used, and two Triangle fillers and weighers never used. This is a wonderful opportunity to get the most efficient automatic filling and sealing units far below today's costs. First come, first served. No dealers. Write or wire Samuel Halaby Inc. Rochester 20, New York.

AMSCO high speed rotary bag sealer (1), with gluing mechanism and pre-heater. 600 lineal inches per min. Takes bags 3" to 15" high. 2 STAPLEX electric-eye staplers. Electric bag openers. Arrow Packaging Co., 230 3rd St., Bklyn. UL 5-2022.

FOR SALE: U.S. Steel Gerrard Hiten Wire for use in Gerrard Wire Tying Machines, prime material in original coils. 14 and 15 gauge, 125,000 lbs., \$9.00 per 100 lbs. FOB. Appalachian Steel Corp., Lyndhurst, N. J.

FOR SALE: WORLD'S LARGEST STOCK of wrappers—Rebuilt and guaranteed. At great saving. All types and sizes of wrapping machines now available for immediate delivery. Pneumatic Scale late style Packaging Unit with Automatic Feeder, Bottom Sealer, Filler, Top Sealer and all interconnecting conveyors. For giant size box. Package Machinery Co. FA, FA2, FA3 and FA4 Wrappers with and without Electric Eye. Hayssen adjustable Wrappers—3"-7", 5"-11", 7"-13", 7"-17", 9"-19", 12"-24", 15"-25". With and without Electric Eye. For cellophane or wax paper. Heat seal or glue seal. Hudson Sharp Campbell Models 2W6, 2W8 and 2W10 Cellophane Wrappers. Jones Automatic Carton Forming and Filling Machine. Standard Knapp 429 Automatic Carton Sealer. Tell Us Your Requirements. Write, Wire, Phone Collect. Union Standard Equipment Company, 318-322 Lafayette Street, New York 12, N.Y.

FOR SALE: PO-2 Roto Bag Machine—2½ years old—12" width maximum—24" length maximum. Complete with electric eye—Excellent condition. Utility Plastic Bag Co., 1101 W. 38th St., Chicago, 9, Ill.

Machinery and Equipment Wanted

WANTED: We are interested in securing a machine to insert tubing into spray plugs. We would appreciate it if anyone having information regarding such a machine would please contact us. Reply Box No. 663, Modern Packaging.

Help Wanted

WANTED—PACKAGE DESIGNER for California. The expanding product development activity of an integrated West Coast manufacturer of paperboard packaging has created an opening for a man with proven ability to apply imagination and ingenuity in finding solutions to a wide range of packaging problems. Required is actual experience in the structural design of corrugated containers and/or folding cartons. Well established corporation with retirement plan and other benefits. Salary open. You are invited to write to present your qualifications, and receive further information, to J. A. Connolly, P. O. Box 3611, San Francisco 6, California.

WANTED: CHIEF CHEMIST to join the staff of a growing Chicago paper converter. To work on research and development assignments. To supervise activities of laboratory and mixing department. Friendly associates along with good pay and benefits make this position worth looking into if you have at least 2 years chemical experience. Why not write us and tell us your background and salary requirements? Reply H. P. SMITH PAPER CO., 5001 W. 66th Street, Chicago 38, Ill.

PACKAGING PERSONNEL: Positions Filled and Secured. A Confidential Nationwide Service for employers seeking personnel and individuals seeking new positions. Inquiries invited. Reply to Graphic Arts Employment Service, Est. 1952, Helen M. Winters, Manager; Dept. PAC-6, 307 East 4th Street, Cincinnati 2, Ohio. Phone Cherry 1-2202.

SALESMEN WANTED: Sales Representatives—Distributors—Jobbers. Your proven experience and know-how selling Pressure Sensitive Tapes and our outstanding German "Tesa" Specialty Tapes can be the right combination. Metropolitan and many wide territories. Offer real opportunity. If you have what it takes our proposition will be just what you're looking for. Reply Box No. 659, Modern Packaging.

SALES—FLEXIBLE PACKAGING: Highly rated, expanding firm with extensive facilities. Printers, converters of polyethylene, cellophane and other packaging materials. Have opening in several territories—some may be handled with non-conflicting line. Territories include Ohio, Texas, Oklahoma, Colorado, Michigan, Wisconsin, Louisiana, Nebraska, Iowa, and Western Pennsylvania. Experience in this field desirable. Give age, history, and type of remuneration desired. Our salesmen know of this ad. Reply Box 660, Modern Packaging.

WANTED: Packaging Engineer with frozen food packaging experience for large packaging machinery manufacturer. Mechanical or Industrial Engineering education and experience useful, but not necessary. Excellent opportunities for growth and income in expanding field. Principal travel area—Midwest. Contact, Food Machinery and Chemical Corporation, Hoopeston, Illinois. Attention: R. F. Hartman, Personnel Manager.

MECHANICAL ENGINEERS: Two Mechanical Engineers to train for responsible positions in Converting Departments of leading manufacturer of specialty wrapping papers. Prefer applicants in the 28 to 35 age group with experience in packaging applications of paper and/or paper converting. An excellent opportunity to join a long established Wisconsin firm with a reputation for "being there first" with new and unusual paper applications. Write, giving usual particulars, resume of educational and work background. Reply Box No. 662, Modern Packaging.

SALES AGENTS WANTED: Package Machinery Sales Representation needed for revolutionary new automatic flying splicer. Integrates with overwrap machines such as Package Machinery FA, FEH, Battle Creek and similar machines. Tested, proven and now in operation in major company. Would prefer someone already established, or having experience as Package Machinery Sales Representative. For further details write to K. Pawley, 27 West 44th Street, New York, N.Y.

Situations Wanted

ENGRAVER Desires Position As Chief Die Maker in foil label Mfg. Co. Presently owner of small successful steel die engraving plant on West Coast. Have Accounting Degree—can assume some executive functions. Must have option of buying into company and some influence in Mgmt. Reply Box No. 661, Modern Packaging.

POSITION WANTED: Supervisory or Technical with paper, film, or foil converter. Age 35 with 12 years supervisory and technical experience with prominent aluminum foil fabricator in coating, laminating, flexographic printing, slitting and control laboratory. Extensive knowledge of foil coatings, adhesives and inks. Familiar with all phases of foil fabrication. Some college in basic engineering subjects. Reply Box No. 666, Modern Packaging.

JOB WANTED—ONE OR TWO DAYS PER WEEK ON PERMANENT BASIS. At present technical director multi-plant AAa-1 company division operating in non-ferrous foil rolling, extrusion, coating, laminating. Metals, papers, films, adhesives, inks. Electronics, containers, and structural. Chemical and metallurgical. Classified and commercial. Reply Box 668, Modern Packaging.

POSITION WANTED by Robert Juneau. Creative selling experience printing and packaging facilities New York, West Coast, Canada, Venezuela. Known in field for numerous packaging innovations. Will relocate or travel. For additional information contact R. Juneau, 247 E. 52nd St., Apt. 3W, N.Y., N.Y.

CREATIVE PACKAGING SPECIALIST: Now with largest flexible converter in the industry. Skilled in all phases of Flexible Packaging. Development, Design and Production through market exploitation seeks Staff position with printer entering converting field, who needs assistance of versatile man. Can assume responsibility for building, directing a Productive Technical or Product Sales organization. Offers valuable assistance on Production Equipment and Methods. Reply Box No. 664, Modern Packaging.

PACKAGING DESIGNER—Artist Food and Beverage Specialist with over thirty years experience is retiring and desires part time connections as consultant and designer. Reply Box No. 667, Modern Packaging.

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Index to Advertisers

June 1957

- | | | |
|---|--|--|
| 180 Acme Gravure Services Inc. | 1 Gair, Robert, Div. Continental Can Co. | 74 New Era Manufacturing Co. |
| 78 Acme Steel Company | 99 Gardner Board And Carton Co., The | 230 Niemand Industries, Inc. |
| 203 Advertising Metal Display Co. Aluminum Co. of America, | 50 Gaylord Container Corp. | 20 Oil Equipment Laboratories, Inc. |
| 84 Collapsible Tubes Div. | 7 Gering Products, Inc. | 161 Olin Mathieson Chemical Corp., Film Division |
| 148 Alcoa Wrap Div. | 15 Gibbs Automatic Moulding Corp. | 225 Oneida Paper Products, Inc. |
| 150 American Flange & Manufacturing Co., Inc. | 201 Gilman Paper Co. | 140-141 Owens-Illinois, |
| 173 American Instrument Co., Inc. | 86 Goodrich, B. F., Company, The | 47 Kimble Glass Co. Subsidiary |
| 97 American Rondo Corporation | 19 Goodyear Tire & Rubber Co., The, Packaging Films Dept. | 73 Oxy-Dry Sprayer Corp. |
| 48 American Viscose Corporation | 25 Growers Container Corp. | 24 Paper Converting Machine Co. |
| 55 Anchor Hocking Glass Corp. | 53 Gummed Products Co., The, Subsidiary of St. Regis Paper Co. | 236 Paper Machinery And Research, Inc. |
| 174 Anderson Bros. Mfg. Co. | 202 Hansella-Werke Albert Henkel A. G. | 204 Paterson Parchment Paper Co. |
| 203 Anorgana G. M. B. H. | 199 Harkin Affiliates, Inc. | 93 Peerless Tube Company |
| 68 Arabol Mfg. Co., The | 182, 183 Hazel-Atlas Glass Div. of Continental Can Co. | 223 Peter Partition Corp. |
| 218 Arenco Machine Co., Inc. | 76 Heekin Can Co., The | 169 Pfizer, Chas., & Co., Inc., Chemical Sales Div. |
| 6 Armstrong Cork Company, Glass and Closure Div. | 194 Heinrich, H. H., Co. | 82, 83 Phillips Petroleum Co., Plastic Sales Div. |
| 165, 166 Atlanta Paper Company | 87 Hesser, Fr. | 189 Plastic Artisans, Inc. |
| 58 Auto Wrappers (Norwich) Ltd. | 177 Hinde & Dauch | 16 Pneumatic Scale Corp., Ltd. |
| 217 Avery Adhesive Label Corp. | 227 Hudson-Sharp Machine Co. | 224 Porter & Dugas, Inc. |
| 145-147 Bakelite Company, A Division of Union Carbide Corp. | 173 Industrial Marking Equipment Co., Inc. | 186 Potdevin Export Corp. |
| 61 Bartelt Engineering Co. | 223 Injection Molders Supply Co. | 98 Precision Extruders, Division of Lamex Chemical Corp. |
| 192 Battle Creek Packaging Machines, Inc. | 81 Inland Container Corp. | 212 Pyroxylin Products, Inc. |
| 221 Bell Machine Co., The | 174 Inman Manufacturing Co., Inc. | 3 Redington, F. B., Co. |
| 26 Bemis Bros. Bag Co. | 89 Inta-Roto Machine Co., Inc. | 188 Resina Automatic Machinery Co., Inc. |
| 57 Bensing Bros. and Deeney | 92 International Staple & Machine Co. | 12, 13 Reynolds Metals Company |
| 180 Bivans, Corporation | 199 Island Equipment Corp. | 179 Rhinelander Paper Co., Subsidiary of St. Regis Paper Co. |
| 214 Black-Clawson Co., The, Dilts Division | 90 Ivers-Lee Co. | 8 Riegel Paper Corp. |
| 69 Bliss, E. W., Co. | 85 J. E. Plastics Mfg. Corp. | 18 Roto-Wrap Div., Conapac Corp. |
| 178 Bradley Container Corp. | 219 Johnston Foil Manufacturing Co. | 66 Rowell, E. N., Co. Inc. |
| 206 British Cellophane Ltd. | 36 Jones & Laughlin Steel Corporation, Container Division | 53 St. Regis Paper Co. |
| 143 Burt, F. N., Co., Inc. | 233 K V P Company, The | 53 Gummed Products Co. Subsidiary |
| 213 Cameo Die And Label Co. | 37 Kaiser Aluminum & Chemical Sales, Inc., Foil Kraft Div. | 179 Rhinelander Paper Co. Subsidiary |
| 33 Cameron Machine Co. | 235 Kehr Products Co. | 222 Scientific Filter Co. |
| 173 Carey Press Corp. | 91 Keyes Fibre Company | 49 Sealright Co., Inc. |
| 64, 65, Celanese Corporation of America, Plastics Div. | 216 Kidder, Peabody & Co., Incorporated | 200 Seal Spout Corp. |
| 190, 191 | 175 Kiefer, Karl, Machine Co., The | 209, 210 Sinclair and Valentine Co. |
| 17 Cellu-Craft Products Corp. | 47 Kimble Glass Company, Subsidiary of Owens-Illinois | Inside Back Cover Standard Packaging Corp. |
| 63 Central Fibre Products Co. | 46 Kleen-Stik Products, Inc. | 27 Steigerwald, A. M., Co. |
| 174 Claremont Waste Manufacturing Co. | 38 Knowlton, M. D., Company | 21 Stokes & Smith Co. |
| 232 Classified | 10 Lowe Paper Company | 186 Sun Tube Corporation |
| 88 Cleveland Container Co., The | 171 Lynch Corporation | 80 Taber Instrument Corp. |
| 77, 159 Cochran Foil Co., Inc. | 215 M R M Company, Inc. | 215 Testing Machines Inc. |
| 45 Columbia Boxboard Mills, Inc. | 197 Markam Machine Co. | 31 Thilmany Pulp & Paper Co. |
| 18 Conapac Corporation, Roto-Wrap Div. | 79 Mercury Engineering Corp. | 52 Toledo Scale Company |
| 56 Container Corporation of America | 224, 231 Mercury Heat Sealing Equipment Co. | 11 Tri-State Plastic Molding Co., Inc. |
| Continental Can Company | 28 Metal Closures Ltd. | 22 Tupper Corporation |
| 1 Robert Gair Div. | 163 Metro Glass Co., Inc. | 145-147 Union Carbide Corp., Bakelite Company Division |
| 182, 183 Hazel-Atlas Glass Div. | 35 Milprint Inc. | 236 United States Rubber Co., Mechanical Goods Div. |
| Back Cover Plastic Container Div. | 23 Minnesota Mining And Manufacturing Co. | 216 Vertrod Corp. |
| Crown Zellerbach Corporation | 187 Mosinee Paper Mills Co. | 34 Visking Company, The |
| 72B, 72C Gummed Tape Division | 62 Mosstype | 193 Vitra-Tone Engraving Corp. |
| 59 Western-Waxide Specialty Packaging Division | 100 Nashua Corporation | 51 Waxed Paper Merchandising Council, Inc. |
| 32 Dale, John, Limited | 9 National Can Corporation | 67 Westchester Plastics, Inc. |
| 189 Davidson Corp. | 42 National Container Corp. | 59 Western-Waxide Specialty Packaging Division, Crown Zellerbach Corporation |
| 30 Dennison Manufacturing Co. | 181 National Folding Box Division, Federal Paper Board Company, Inc. | 205 Wirz, A. H., Inc. |
| 184, 185 Dewey & Almy Chemical Co., Division W. R. Gracc & Co. | Inside Front Cover National Starch Products Inc. | 29 Wright Machinery Co., Div. of Sperry Rand Corp. |
| 226 Dillon-Beck Manufacturing Co. | | 199 Zumbiel, C. W., Co., The |
| 75 Dixie Wax Paper Co. | | |
| 5 Dobeckmun Company | | |
| 70, 71, Dow Chemical Co., The | | |
| 228-229 duPont de Nemours, E. I., & Co. (Inc.) | | |
| 40, 41 Film Dept., Cellophane | | |
| 39 Film Dept., Mylar | | |
| 95, 96 Polychemicals Dept. | | |
| 72 Dusenbery, John, Co., Inc. | | |
| 186 Exact Weight Scale Co., The | | |
| 181 Federal Paperboard Company, Inc., National Folding Box Division | | |
| 195, 196 Fibreboard Paper Products Corp. | | |
| 194 Frank, Walter, Organization, The | | |

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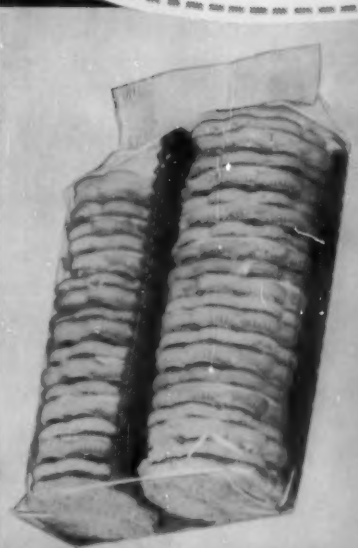
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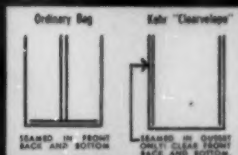


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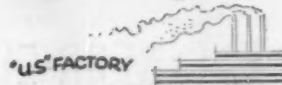
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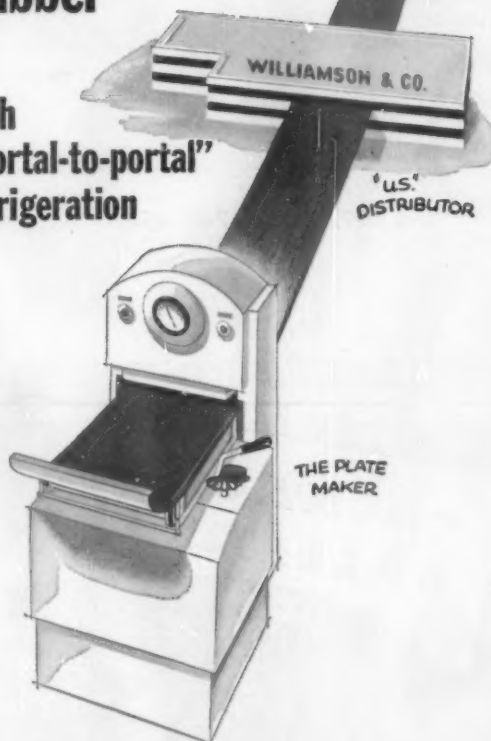


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